2000 Index
IEEE Transactions on Instrumentation and Measurement
Vol. 49

This index covers all technical items - papers, correspondence, reviews, etc. that appeared in this periodical during 2000, and items from previous years that were commented upon or corrected in 2000. Departments and other items may be also covered if they have been judged to have archival value.

The Author Index contains the primary entry for each item, listed under the first author's name. The primary entry includes the coauthors' names, the title of the paper or other item, and its location, specified by the publication abbreviation, year, month, and inclusive pagination. The Subject Index contains entries describing the item under all appropriate subject headings, plus the first author's name, the publication abbreviation, month, and year, and inclusive pages. Subject cross-references are included to assist in finding items of interest. Note that the item title is found only under the primary entry in the Author Index.

AUTHOR INDEX

A

Accomando, G., *see* Sampietro, N., *T-IM Aug 00* 820-822

Acharya, Y.B., and P.D. Vyavahare. A low-current logarithmic LED electrometer; *T-IM Feb 00* 5-9

Adde, R., *see* Hafdallah, H., *T-IM Feb 00* 172-177

Alam, M.S., J.G. Bognar, R.C. Hardie, and B.J. Yasuda. Infrared image registration and high-resolution reconstruction using multiple translationally shifted aliased video frames; *T-IM Oct 00* 915-923

Aleksic, Z.J. Minimization of the optical smoke detector false alarm probability by optimizing its frequency characteristic; *T-IM Feb 00* 37-42

Aleksic, Z.J. Evaluation of the design requirements for the electrical part of transmission-type optical smoke detector to improve its threshold stability to slowly varying influences; *T-IM Oct 00* 1057-1062

Alippi, C., E. Casagrande, F. Scotti, and V. Piuri. Composite real-time image processing for railways track profile measurement; *T-IM Jun 00* 559-564

Aliverti, P., *see* Bonarini, A., *T-IM Jun 00* 509-512

Allen, R.A., *see* Penzes, W.B., *T-IM Dec 00* 1285-1288

Amir, A., *see* Baroni, G., *T-IM Jun 00* 476-482

Ando, B., S. Baglio, S. Graziani, and N. Pitrone. Measurements of parameters influencing the optimal noise level in stochastic systems; *T-IM Oct 00* 1137-1143

Angelini, E., *see* Carullo, A., *T-IM Apr 00* 371-375

Angenieux, G., *see* Ferrari, P., *T-IM Feb 00* 178-187

Angrisani, L., P. Daponte, and M. D'Apuzzo. The detection of echoes from multilayer structures using the wavelet transform; *T-IM Aug 00* 727-731

Angrisani, L., P. Daponte, and M. D'Apuzzo. A measurement method based on time-frequency representations for testing GSM equipment; *T-IM Oct 00* 1050-1056

Arcari, G., *see* Roy, L., *T-IM Apr 00* 409-412

Arpaia, P., A. Baccigalupi, F. Cennamo, and P. Daponte. A measurement laboratory on geographic network for remote test experiments; *T-IM Oct 00* 992-997

Asari, K., *see* Sato, K., *T-IM Feb 00* 19-24

Assaf, M.H., *see* Das, S.R., *T-IM Jun 00* 690-705

Asumadu, J.A., *see* Werkema, D.D., *T-IM Dec 00* 1249-1253

Atekwana, E., *see* Werkema, D.D., *T-IM Dec 00* 1249-1253

Attari, M., and P. Fabry. On the static and dynamic selectivity study of a sodium sensor; *T-IM Aug 00* 732-735

Attivissimo, F., M. Savino, and A. Trotta. A study on nonlinear averagings to perform the characterization of power spectral density estimation algorithms; *T-IM Oct 00* 1036-1042

Avramov-Zamurovic, S., *see* Koffman, A.D., *T-IM Apr 00* 346-348

Avramov-Zamurovic, S., A.D. Koffman, N.M. Oldham, and B.C. Waltrip. The sensitivity of a method to predict a capacitor's frequency characteristic; *T-IM Apr 00* 398-404

Azhari, S.J., and H. Fazlalipoor. A novel current mode instrumentation amplifier (CMIA) topology; *T-IM Dec 00* 1272-1277

B

Babu, N.S.C., *see* Prasad, V.C., *T-IM Dec 00* 1289-1297

Baccigalupi, A., *see* Arpaia, P., *T-IM Oct 00* 992-997

Baglio, S., *see* Ando, B., *T-IM Oct 00* 1137-1143

Balachandran, W., *see* Cecelja, F., *T-IM Jun 00* 483-487

Bao, Q., *see* Zhu, R., *T-IM Dec 00* 1183-1188

Barakat, T.F., *see* Das, S.R., *T-IM Jun 00* 690-705

Barash, V.Y., *see* Didosyan, Y.S., *T-IM Feb 00* 14-18

Barford, L.A., *see* Manders, E.-J., *T-IM Jun 00* 503-508

Barmatz, M., *see* Welander, P., *T-IM Apr 00* 253-255

Barnett, R.J., *see* Manders, E.-J., *T-IM Jun 00* 503-508

Baroni, G., C. Rigotti, A. Amir, G. Ferrigno, D. Newman, and A. Pedotti. Multifactorial movement analysis in weightlessness: a ground-based feasibility study; *T-IM Jun 00* 476-482

Barwicz, A., *see* Wisniewski, M.P., *T-IM Feb 00* 43-48

Barwicz, A., M.B. Slima, J. Barwicz, and P. Tancrede. Signal processing support for the evaluation of blood toxic oxidation activity; *T-IM Jun 00* 541-545

Barwicz, A., *see* Ben Slima, M., *T-IM Dec 00* 1224-1230

Barwicz, J., *see* Barwicz, A., *T-IM Jun 00* 541-545

Bazin, G., *see* Journet, B., *T-IM Aug 00* 840-843

Benally, A.D., *see* Bois, K.J., *T-IM Feb 00* 49-55

Benati, F., *see* Kang, H., *T-IM Apr 00* 228-233

Benech, P., M. Dali-Ali, and J.-P. Keradec. Characterization of material versus temperature using P(VDF-TrFE) SAW transducers; *T-IM Dec 00* 1264-1266

Benetazzo, L., M. Bertocco, F. Ferraris, A. Ferrero, C. Offelli, M. Parvis, and V. Piuri. A Web-based distributed virtual educational laboratory; *T-IM Apr 00* 349-356

Benetazzo, L., M. Bertocco, P. Paglierani, and E. Rizzi. Speech/voice-band data classification for data traffic measurements in telephone-type systems; *T-IM Apr 00* 413-417

Benoit, E., *see* Mauris, G., *T-IM Aug 00* 835-839

Ben Slima, M., L.L. Szczecinski, D. Massicotte, R.Z. Morawski, and A. Barwicz. Algorithmic specification of a specialized processor for spectrometric applications; *T-IM Dec 00* 1224-1230

Berini, P., *see* Zhu, Y., *T-IM Dec 00* 1231-1239

Bernieri, A., G. Betta, G. Rubinacci, and F. Villone. A measurement system based on magnetic sensors for nondestructive testing; *T-IM Apr 00* 455-459

Berrah, L., *see* Mauris, G., *T-IM Feb 00* 89-93

Berthault, A., *see* Sagnard, F., *T-IM Oct 00* 942-948

Bertocco, M., C. Narduzzi, P. Paglierani, and D. Petri. A noise model for digitized data; *T-IM Feb 00* 83-86

Bertocco, M., *see* Benetazzo, L., *T-IM Apr 00* 349-356

Bertocco, M., *see* Benetazzo, L., *T-IM Apr 00* 413-417

Bertocco, M., A. Flammini, D. Marioli, and A. Taroni. Robust and accurate real-time estimation of sensors signal parameters by a DSP approach; *T-IM Jun 00* 685-689

Bertocco, M., C. Narduzzi, P. Paglierani, and E. Rizzi. An in-service measurement system for the quality analysis of facsimile transmissions; *T-IM Dec 00* 1267-1271

Betta, G., and A. Pietrosanto. An intrinsic fiber optic temperature sensor; *T-IM Feb 00* 25-29

Betta, G., and A. Pietrosanto. Instrument fault detection and isolation: state of the art and new research trends; *T-IM Feb 00* 100-107

Betta, G., *see* Bernieri, A., *T-IM Apr 00* 455-459

Betta, G., A. Pietrosanto, and A. Scaglione. Temperature measurement by multifiber optical sensor; *T-IM Oct 00* 1004-1008

Bhattacharya, A., *see* Gupta, S., *T-IM Feb 00* 66-70

Bijukumar, S., *see* Raveendranath, U., *T-IM Dec 00* 1305-1312

Biswas, G., *see* Manders, E.-J., *T-IM Jun 00* 503-508

Blank, R., *see* Breitenbach, A., *T-IM Apr 00* 388-391

Bock, W.J., and W. Urbanczyk. Coherence multiplexing of fiber-optic pressure and temperature sensors based on highly birefringent fibers; *T-IM Apr 00* 392-397

Bock, W.J., and T.A. Eftimov. Polarization-sensitive intermodal all-fiber sensor using spectrally resolved detection; *T-IM Apr 00* 405-408

Boella, G., *see* Galliana, F., *T-IM Oct 00* 959-963

Bognar, J.G., *see* Alam, M.S., *T-IM Oct 00* 915-923

Bogosanovich, M. Microstrip patch sensor for measurement of the permittivity of homogeneous dielectric materials; *T-IM Oct 00* 1144-1148

Bois, K.J., A.D. Benally, and R. Zoughi. Microwave near-field reflection property analysis of concrete for material content determination; *T-IM Feb 00* 49-55

Bojkovski, J., J. Drnovsek, I. Pusnik, and T. Tasic. Automation of a precision temperature calibration laboratory; *T-IM Jun 00* 596-601

Bonarini, A., P. Aliverti, and M. Lucioni. An omnidirectional vision sensor for fast tracking for mobile robots; *T-IM Jun 00* 509-512

Borges, G.A., A.M.N. Lima, and G.S. Deep. Characterization of a trajectory recognition optical sensor for an automated guided vehicle; *T-IM Aug 00* 813-819

Borghese, N.A., and S. Ferrari. A portable modular system for automatic acquisition of 3D objects; *T-IM Oct 00* 1128-1136

Borkowski, J. LIDFT-the DFT linear interpolation method; *T-IM Aug 00* 741-745

Bosco, G.C., *see* Pogliano, U., *T-IM Aug 00* 896-900

Bose, T.K., *see* Legendre, S., *T-IM Jun 00* 524-530

Bosnjakovic, P., *see* Djokic, B., *T-IM Feb 00* 161-165

Boubal, O., and J. Oksman. Knock acoustic signal estimation using parametric inversion; *T-IM Aug 00* 890-895

Bourdel, E., D. Pasquet, P. Denorme, and A. Roussel. Measurement of the moisture content with a cylindrical resonating cavity in TM_{010} mode; *T-IM Oct 00* 1023-1028

Bozzi, E., and M. Bramanti. A planar applicator for measuring surface dielectric constant of materials; *T-IM Aug 00* 773-775

Brahim-Belhouari, S., M. Kieffer, G. Fleury, L. Jaulin, and E. Walter. Model selection via worst-case criterion for nonlinear bounded-error estimation; *T-IM Jun 00* 653-658

Bramanti, M., *see* Bozzi, E., *T-IM Aug 00* 773-775

Brasseur, G., P.L. Fulmek, and W. Smetana. Virtual rotor grounding of capacitive angular position sensors; *T-IM Oct 00* 1108-1111

Bregni, S., and S. Maccabruni. Fast computation of maximum time interval error by binary decomposition; *T-IM Dec 00* 1240-1244

Breitenbach, A., and R. Blank. Two methods for the comparison of hand movement signal quality; *T-IM Apr 00* 388-391

Broersen, P.M.T., *see* de Waele, S., *T-IM Apr 00* 216-222

Broersen, P.M.T., and S. de Waele. Detection of methacholine with time series models of lung sounds; *T-IM Jun 00* 517-523

Broersen, P.M.T. Facts and fiction in spectral analysis; *T-IM Aug 00* 766-772

Broersen, P.M.T. How to select polynomial models with an accurate derivative; *T-IM Oct 00* 910-914

Brudzewski, K., *see* Osowski, S., *T-IM Apr 00* 424-428

Bucci, G., and C. Landi. A multi-DSP based instrument on a VXI C-size module for real-time measurements; *T-IM Aug 00* 884-889

Bucci, G., C. Landi, and G. Ocera. A novel technique for testing pulsed RF MSK data communication devices; *T-IM Oct 00* 1009-1017

Bucci, G., M. Faccio, and C. Landi. New ADC with piecewise linear characteristic: Case study - Implementation of a smart humidity sensor; *T-IM Dec 00* 1154-1166

Butler, C., *see* Kang, H., *T-IM Apr 00* 228-233

C

Callegaro, L., and V. D'Elia. A synchronized two-phase sinewave generator for AC metrology system compensations; *T-IM Apr 00* 320-324

Campa, R., *see* Kelly, R., *T-IM Aug 00* 857-861

Caorsi, S., *see* Pastorino, M., *T-IM Jun 00* 573-578

Carbone, P., and D. Petri. Average power estimation under nonsinusoidal conditions; *T-IM Apr 00* 333-336

Carbone, P., and D. Petri. Performance of stochastic and deterministic dithered quantizers; *T-IM Apr 00* 337-340

Carbone, P., E. Nunzi, and D. Petri. Frequency-domain-based least-squares estimation of multifrequency signal parameters; *T-IM Jun 00* 555-558

Carlosena, A., C. Macua, and M. Zivanovic. Instrument for the measurement of the instantaneous frequency; *T-IM Aug 00* 783-789

Carocci, M., *see* Sansoni, G., *T-IM Jun 00* 628-636

Carro, L., *see* Cota, E.F., *T-IM Apr 00* 223-227

Carullo, A., F. Ferraris, M. Parvis, A. Vallan, E. Angelini, and P. Spinelli. Low-cost electrochemical impedance spectroscopy system for corrosion monitoring of metallic antiquities and works of art; *T-IM Apr 00* 371-375

Casagrande, E., *see* Alippi, C., *T-IM Jun 00* 559-564

Caslellini, P., A. Scalise, and L. Scalise. A 3-D measurement system for the extraction of diagnostic parameters in suspected skin nevoid lesions; *T-IM Oct 00* 924-928

Cassiago, C., G. La Paglia, and U. Pogliano. Stability evaluation of high-precision multifunction instruments for traceability transfer; *T-IM Dec 00* 1206-1210

Castelli, F. A proposal for a toroidal cross-capacitor; *T-IM Aug 00* 721-726

Cecelja, F., and W. Balachandran. Optimized CdTe sensors for measurement of electric and magnetic fields in the near-field region; *T-IM Jun 00* 483-487

Cennamo, F., *see* Arpaia, P., *T-IM Oct 00* 992-997

Chakrabarty, A., *see* Gupta, S., *T-IM Feb 00* 66-70

Chakrabarty, K., and S.R. Das. Test-set embedding based on width compression for mixed-mode BIST; *T-IM Jun 00* 671-678

Chakrabarty, K., *see* Das, S.R., *T-IM Jun 00* 690-705

Changsen Sun, Xiaoge Yu, and Junxiu Lin. Two practical methods for improving the long-term stability of the photoelastic optical fiber pressure sensor; *T-IM Aug 00* 776-778

Charbonnier, S., S. Galichet, G. Mauris, and J.P. Siche. Statistical and fuzzy models of ambulatory systolic blood pressure for hypertension diagnosis; *T-IM Oct 00* 998-1003

Chen Chun-Yu, *see* Chun-Yu Chen, *T-IM Feb 00* 77-82

Cheng-Chung Hsu, and Wu-Shiung Feng. Testable design of multiple-stage OTA-C filters; *T-IM Oct 00* 929-934

Cheng Li, *see* Ke-Jun Xu, *T-IM Oct 00* 935-941

Chen Song, *see* Yili Liu, *T-IM Oct 00* 980-983

Chiang, K.S., *see* Yi, B., *T-IM Apr 00* 418-423

Chieh-Hsiun Kuan, *see* Chun-Yu Chen, *T-IM Feb 00* 77-82

Chimene, M.F., and R. Pallas-Areny. A comprehensive model for power line interference in biopotential measurements; *T-IM Jun 00* 535-540

Chowdhury, S., *see* Giakos, G.C., *T-IM Apr 00* 300-306

Chu, C.B., *see* Yi, B., *T-IM Apr 00* 418-423

Chung, H.S.H., *see* Yi, B., *T-IM Apr 00* 418-423

Chung-Ping Young, Wei-Lun Juang, and M.J. Devaney. Real-time Intranet-controlled virtual instrument multiple-circuit power monitoring; *T-IM Jun 00* 579-584

Chun-Yu Chen, and Chieh-Hsiun Kuan. Design and calibration of a noise measurement system; *T-IM Feb 00* 77-82

Ciofi, C., I. Ciofi, S.C. Di Pascoli, and B. Neri. Temperature controlled oven for low noise measurement systems [for electromigration characterization]; *T-IM Jun 00* 546-549

Ciofi, I., *see* Ciofi, C., *T-IM Jun 00* 546-549

Corra Alegria, E., and A. Cruz Serra. Automatic calibration of analog and digital measuring instruments using computer vision; *T-IM Feb 00* 94-99

Cota, E.F., M. Negreiros, L. Carro, and M. Lubaszewski. A new adaptive analog test and diagnosis system; *T-IM Apr 00* 223-227

Cova, S., *see* Zappa, F., *T-IM Dec 00* 1167-1175

Cresswell, M.W., *see* Penzes, W.B., *T-IM Dec 00* 1285-1288

Cretu, M., *see* Pereira, J.M.D., *T-IM Oct 00* 1122-1127

Crozat, P., *see* Hafdallah, H., *T-IM Feb 00* 172-177

Cruden, A., *see* Niewczas, P., *T-IM Dec 00* 1254-1259

Cruz Serra, A., *see* Corra Alegria, E., *T-IM Feb 00* 94-99

D

Dali-Ali, M., *see* Benech, P., *T-IM Dec 00* 1264-1266

Daponte, P., *see* Angrisani, L., *T-IM Aug 00* 727-731

Daponte, P., *see* Arpaia, P., *T-IM Oct 00* 992-997

Daponte, P., *see* Angrisani, L., *T-IM Oct 00* 1050-1056

D'Apuzzo, M., *see* Angrisani, L., *T-IM Aug 00* 727-731

D'Apuzzo, M., *see* Angrisani, L., *T-IM Oct 00* 1050-1056

Das, S.R., *see* Chakrabarty, K., *T-IM Jun 00* 671-678

Das, S.R., T.F. Barakat, E.M. Petriu, M.H. Assaf, and K. Chakrabarty. Space compression revisited; *T-IM Jun 00* 690-705

Dash, P.K., R.K. Jena, G. Panda, and A. Routray. An extended complex Kalman filter for frequency measurement of distorted signals; *T-IM Aug 00* 746-753

De Bonitatibus, A., C. De Capua, and C. Landi. Automatic test equipment for the measurement of symmetrical and asymmetrical RE interference based on hybrid junctions; *T-IM Dec 00* 1337-1343

De Capua, C., *see* De Bonitatibus, A., *T-IM Dec 00* 1337-1343

Deep, G.S., *see* Borges, G.A., *T-IM Aug 00* 813-819

de Jong, G., *see* Li, X., *T-IM Apr 00* 256-259

de Jong, P.C., and G.C.M. Meijer. A high-temperature electronic system for pressure-transducers; *T-IM Apr 00* 365-370

Del Gobbo, G., *see* Sasdelli, R., *T-IM Apr 00* 460-467

D'Elia, V., *see* Callegaro, L., *T-IM Apr 00* 320-324

Dembele, S., *see* Sandoz, P., *T-IM Aug 00* 867-872

Denorme, P., *see* Bourdel, E., *T-IM Oct 00* 1023-1028

De Santo, M., C. Liguori, and A. Pietrosanto. Uncertainty characterization in image-based measurements: a preliminary discussion; *T-IM Oct 00* 1101-1107

Devaney, M.J., *see* Weon-Ki Yoon, *T-IM Apr 00* 246-252

Devaney, M.J., *see* Chung-Ping Young, *T-IM Jun 00* 579-584

de Waele, S., and P.M.T. Broersen. Error measures for resampled irregular data; *T-IM Apr 00* 216-222

de Waele, S., *see* Broersen, P.M.T., *T-IM Jun 00* 517-523

Didosyan, Y.S., H. Hauser, J. Nicolics, V.Y. Barash, and P.L. Fulmek. Magneto-optical current sensor by domain wall motion in orthoferrites; *T-IM Feb 00* 14-18

Di Pascoli, S.C., *see* Ciofi, C., *T-IM Jun 00* 546-549

Djokic, B., E. So, and P. Bosnjakovic. A high performance frequency insensitive quadrature phase shifter and its application in reactive power measurements; *T-IM Feb 00* 161-165

Dodson, C.T.J., *see* Scharcanski, J., *T-IM Oct 00* 971-979

Donlagic, D., M. Zavrsnik, and I. Sirotic. The use of one-dimensional acoustical gas resonator for fluid level measurements; *T-IM Oct 00* 1095-1100

Drnovsek, J., *see* Bojkovski, J., *T-IM Jun 00* 596-601

Dufort, B., and G.W. Roberts. Increasing the performance of arbitrary waveform generators using periodic sigma-delta modulated streams; *T-IM Feb 00* 188-199

Dupuis, P., and C. Eugene. Combined detection of respiratory and cardiac rhythm disorders by high-resolution differential cuff pressure measurement; *T-IM Jun 00* 498-502

Durdle, N.G., *see* Lou, E., *T-IM Feb 00* 108-113

Dusza, J., *see* Kot-Nawrocki, E.P., *T-IM Aug 00* 754-761

E

Eftimov, T.A., *see* Bock, W.J., *T-IM Apr 00* 405-408

Elmquist, R.E. Calculable coaxial resistors for precision measurements; *T-IM Apr 00* 210-215

Eugene, C., *see* Dupuis, P., *T-IM Jun 00* 498-502

Evans, C., and D. Rees. Nonlinear distortions and multisine signals. I. Measuring the best linear approximation; *T-IM Jun 00* 602-609

Evans, C., and D. Rees. Nonlinear distortions and multisine signals. II. Minimizing the distortion; *T-IM Jun 00* 610-616

F

Fabry, P., *see* Attari, M., *T-IM Aug 00* 732-735

Facchini, M., *see* Martini, G., *T-IM Aug 00* 823-828

Faccio, M., *see* Bucci, G., *T-IM Dec 00* 1154-1166

Fahrenkrug, C.C.F., and L.M. Head. Instrumentation effects on the detection of resistance transients during accelerated testing of VLSI interconnects; *T-IM Aug 00* 716-720

Fasoli, L.G., *see* Sampietro, N., *T-IM Aug 00* 820-822

Fazlalipoor, H., *see* Azhari, S.J., *T-IM Dec 00* 1272-1277

Feng Wu-Shiung, *see* Cheng-Chung Hsu, *T-IM Oct 00* 929-934

Ferrari, G., *see* Sampietro, N., *T-IM Aug 00* 820-822

Ferrari, P., and G. Angenieux. Calibration of a time-domain network analyzer: a new approach; *T-IM Feb 00* 178-187

Ferrari, S., *see* Borghese, N.A., *T-IM Oct 00* 1128-1136

Ferrari, V., D. Marioli, and A. Taroni. Oscillator-based interface for measurand-plus-temperature readout from resistive bridge sensors; *T-IM Jun 00* 585-590

Ferraris, F., *see* Benetazzo, L., *T-IM Apr 00* 349-356

Ferraris, F., *see* Carullo, A., *T-IM Apr 00* 371-375

Ferrero, A., *see* Madonna, G., *T-IM Apr 00* 285-289

Ferrero, A., *see* Benetazzo, L., *T-IM Apr 00* 349-356

Ferrero, A., and C. Muscas. On the selection of the "best" test waveform for calibrating electrical instruments under nonsinusoidal conditions; *T-IM Apr 00* 382-387

Ferrero, A.M., *see* Svelto, C., *T-IM Jun 00* 550-554

Ferrigno, G., *see* Baroni, G., *T-IM Jun 00* 476-482

Filipski, P.S., and R.L. Rinfret. An automated AC-DC transfer calibration system; *T-IM Apr 00* 279-284

Fiorentin, P., S. Peruzzo, and N. Pomaro. Electromagnetic transducers close to high-temperature plasma in the thermonuclear fusion experiment RFX; *T-IM Apr 00* 290-293

Flammini, A., *see* Bertocco, M., *T-IM Jun 00* 685-689

Fleury, G., *see* Brahim-Belhouari, S., *T-IM Jun 00* 653-658

Foulloy, L., *see* Mauris, G., *T-IM Feb 00* 89-93

Foulloy, L., *see* Mauris, G., *T-IM Aug 00* 835-839

Foulloy, L., *see* Mauris, G., *T-IM Dec 00* 1201-1205

Friel, G.A., *see* Irons, F.H., *T-IM Jun 00* 659-665

Fu, Y., *see* Lang, S.Y.T., *T-IM Dec 00* 1344-1357

Fujii, Y., *see* Shiota, F., *T-IM Oct 00* 1117-1121

Fulmek, P.L., *see* Didosyan, Y.S., *T-IM Feb 00* 14-18

Fulmek, P.L., *see* Brasseur, G., *T-IM Oct 00* 1108-1111

Furlan, M., *see* Overney, F., *T-IM Dec 00* 1326-1330

G

Galichet, S., *see* Charbonnier, S., *T-IM Oct 00* 998-1003

Galliana, F., and G. Boella. The electrical DC resistance scale from 100 kΩ to 1 TΩ at IEN; *T-IM Oct 00* 959-963

Gao, R.X., *see* Wang, C., *T-IM Apr 00* 325-332

Gao Yi-Zhu, *see* Watanabe, K., *T-IM Jun 00* 679-684

Gatti, E.C., *see* Sampietro, N., *T-IM Aug 00* 820-822

Ghioni, M., *see* Zappa, F., *T-IM Dec 00* 1167-1175

Giakos, G.C., N. Shah, and S. Chowdhury. A novel sensor for X-ray imaging applications; *T-IM Apr 00* 300-306

Giannetti, R. On resistor-induced thermal noise in linear circuits; *T-IM Feb 00* 87-88

Girao, P.M.B.S., *see* Pereira, J.M.D., *T-IM Oct 00* 1122-1127

Giudice, A.C., *see* Zappa, F., *T-IM Dec 00* 1167-1175

Giustolisi, G., G. Palmisano, and G. Palumbo. CMRR frequency response of CMOS operational transconductance amplifiers; *T-IM Feb 00* 137-143

Gobovic, D., *see* Tadic, N., *T-IM Dec 00* 1318-1325

Gori, S., and C. Narduzzi. Application of a phase measurement algorithm to digitizing oscilloscope characterization; *T-IM Dec 00* 1211-1215

Goyette, J., *see* Legendre, S., *T-IM Jun 00* 524-530

Graziani, S., *see* Ando, B., *T-IM Oct 00* 1137-1143

Grimaldi, D., L. Michaeli, and A. Palumbo. Automatic and accurate evaluation of the parameters of a magnetic hysteresis model; *T-IM Feb 00* 154-160

Groen, F.C.A., *see* Spoelder, H.J.W., *T-IM Dec 00* 1331-1336

Gros, X.E., Zheng Liu, K. Tsukada, and K. Hanasaki. Experimenting with pixel-level NDT data fusion techniques; *T-IM Oct 00* 1083-1090

Grover, C., *see* Zhu, Y., *T-IM Dec 00* 1231-1239

Gupta, S., A. Bhattacharya, K.S. Ranga Rao, and A. Chakrabarty. A simple method for measuring the dielectric constant of solids; *T-IM Feb 00* 66-70

Gutierrez-Martinez, C., B. Sanchez-Rinza, J. Rodriguez-Asomoza, and J. Pedraza-Contreras. Automated measurement of optical coherence lengths and optical delays for applications in coherence-modulated optical transmissions; *T-IM Feb 00* 32-36

H

Hafdallah, H., A. Ouslimani, R. Adde, G. Vernet, and P. Crozat. Feasibility of picosecond electrical sampling using GaAs FET; *T-IM Feb 00* 172-177

Hahn, I., *see* Welander, P., *T-IM Apr 00* 253-255

Hampicke, D., *see* Thoma, R.S., *T-IM Apr 00* 357-364

Hampton, R.D., and M.S. Whorton. Frequency-weighting filter selection for H_2 control of microgravity isolation systems: A consideration of the "implicit frequency weighting" problem; *T-IM Apr 00* 265-269

Hanasaki, K., *see* Gros, X.E., *T-IM Oct 00* 1083-1090

Handel, P., M. Skoglund, and M. Pettersson. A calibration scheme for imperfect quantizers; *T-IM Oct 00* 1063-1068

Handel, P. Properties of the IEEE-STD-1057 four-parameter sine wave fit algorithm; *T-IM Dec 00* 1189-1193

Hara, T., *see* Sato, K., *T-IM Feb 00* 19-24

Hardie, R.C., *see* Alam, M.S., *T-IM Oct 00* 915-923

Haurat, A., *see* Mauris, G., *T-IM Feb 00* 89-93

Hauser, H., *see* Didosyan, Y.S., *T-IM Feb 00* 14-18

Hauser, H., R. Steindl, C. Hausleitner, A. Pohl, and J. Nicolics. Wirelessly interrogable magnetic field sensor utilizing giant magneto-impedance effect and surface acoustic wave devices; *T-IM Jun 00* 648-652

Hausleitner, C., *see* Hauser, H., *T-IM Jun 00* 648-652

Head, L.M., *see* Fahrenkrug, C.C.F., *T-IM Aug 00* 716-720

Hill, D.L., *see* Lou, E., *T-IM Feb 00* 108-113

Holdem, J.R., R.B. Keam, and J.A. Schoonees. Estimation of the number of frequencies and bandwidth for the surface measurement of soil moisture as a function of depth; *T-IM Oct 00* 964-970

Hollberg, L., *see* Kitching, J., *T-IM Dec 00* 1313-1317

Horng Jiun-Wei, *see* Jiun-Wei Horng, *T-IM Oct 00* 1043-1045

Hsu Cheng-Chung, *see* Cheng-Chung Hsu, *T-IM Oct 00* 929-934

Huadong Wu, and M. Siegel. Correlation of accelerometer and microphone data in the "coin tap test"; *T-IM Jun 00* 493-497

Huang, S.N., *see* Tan, K.K., *T-IM Oct 00* 984-991

Hummels, D.M., *see* Irons, F.H., *T-IM Jun 00* 659-665

I

Inglis, D., and B. Wood. Why nanovoltmeter offset currents do not explain measured deviations in the quantized Hall resistance; *T-IM Dec 00* 1358-1359

Irons, F.H., K.J. Riley, D.M. Hummels, and G.A. Friel. The noise power ratio-theory and ADC testing; *T-IM Jun 00* 659-665

Ito, S., *see* Ozdemir, S.K., *T-IM Oct 00* 1029-1035

Iuculano, G., *see* Sasdelli, R., *T-IM Apr 00* 460-467

Ivaschescu, V. Small sinusoidal vibrations amplitude measurements with the Michelson interferometer; *T-IM Jun 00* 643-647

J

Janex, A., *see* Sandoz, P., *T-IM Aug 00* 867-872

Jarosz, B.J. Interstitial instrumentation for therapeutic ultrasonic heating: modeling the discrete blood vessels; *T-IM Apr 00* 260-264

Jaulin, L., *see* Brahim-Belhouari, S., *T-IM Jun 00* 653-658

Jeanneret, B., *see* Overney, F., *T-IM Dec 00* 1326-1330

Jena, R.K., *see* Dash, P.K., *T-IM Aug 00* 746-753

Jiming Yin, Mi Lu, and J. Pineda de Gyvez. Full-signature real-time corrosion detection of underground casing pipes; *T-IM Feb 00* 120-128

Jin Wei, *see* Libo Yuan, *T-IM Aug 00* 779-782

Jiun-Wei Horng New configuration for realizing universal voltage-mode filter using two current feedback amplifiers; *T-IM Oct 00* 1043-1045

Johnson, B.P., *see* McKee, J.M., *T-IM Feb 00* 114-119

Jou, H.-L., *see* Wu, K.-D., *T-IM Dec 00* 1216-1223

Joubert, J., *see* Mayhew-Ridgers, G., *T-IM Oct 00* 949-958

Journet, B., and G. Bazin. A low-cost laser range finder based on an FMCW-like method; *T-IM Aug 00* 840-843

Juang Wei-Lun, *see* Chung-Ping Young, *T-IM Jun 00* 579-584

Junxiu Lin, *see* Changsen Sun, *T-IM Aug 00* 776-778

K

Kalisz, J., *see* Szplet, R., *T-IM Aug 00* 879-883

Kaliyugavaradan, S. A linear resistance-to-time converter with high resolution; *T-IM Feb 00* 151-153

Kalliola, K., H. Laitinen, L.I. Vaskelainen, and P. Vainikainen. Real-time 3-D spatial-temporal dual-polarized measurement of wideband radio channel at mobile station; *T-IM Apr 00* 439-448

Kampik, M., H. Laiz, and M. Klonz. Comparison of three accurate methods to measure AC voltage at low frequencies; *T-IM Apr 00* 429-433

Kang, H., Q. Yang, C. Butler, T. Xie, and F. Benati. Optimization of sensor locations for measurement of flue gas flow in industrial ducts and stacks using neural networks; *T-IM Apr 00* 228-233

Kanoun, O. Modeling the p-n junction i-u characteristic for an accurate calibration-free temperature measurement; *T-IM Aug 00* 901-904

Karbsek, M., *see* Tobben, H., *T-IM Feb 00* 10-13

Kavanagh, R.C. Shaft encoder characterization via theoretical model of differentiator with both differential and integral nonlinearities; *T-IM Aug 00* 795-801

Kawakami, T., *see* Singh, R., *T-IM Feb 00* 30-31

Kawano, N., *see* Sato, K., *T-IM Feb 00* 19-24

Kawasaki, Z., *see* Mardiana, R., *T-IM Apr 00* 376-381

Keam, R.B., *see* Holdem, J.R., *T-IM Oct 00* 964-970

Ke-Jun Xu, and Cheng Li. Dynamic decoupling and compensating methods of multi-axis force sensors; *T-IM Oct 00* 935-941

Kelly, R., J. Llamas, and R. Campa. A measurement procedure for viscous and coulomb friction; *T-IM Aug 00* 857-861

Keradec, J.-P., *see* Benech, P., *T-IM Dec 00* 1264-1266

Kieffer, M., *see* Brahim-Belhouari, S., *T-IM Jun 00* 653-658

Kimoto, A., and K. Shida. Imaging of temperature-change distribution in the brain phantom by means of capacitance measurement; *T-IM Jun 00* 591-595

Kiranon, R., C. Loescharataramdee, W. Petchakit, and W. Sangpisit. An arbitrary power law device based on integrators; *T-IM Dec 00* 1176-1182

Kitching, J., S. Knappe, N. Vukicevic, L. Hollberg, R. Wynands, and W. Weidmann. A microwave frequency reference based on VCSEL-driven dark line resonances in Cs vapor; *T-IM Dec 00* 1313-1317

Klonz, M., *see* Kampik, M., *T-IM Apr 00* 429-433

Knappe, S., *see* Kitching, J., *T-IM Dec 00* 1313-1317

Knochel, R., *see* Weiss, M., *T-IM Jun 00* 488-492

Kobayashi, I., and K. Kuroda. Step-type optical delay line using silica-based planar light-wave circuit (PLC) technology; *T-IM Aug 00* 762-765

Koffman, A.D., S. Avramov-Zamurovic, B.C. Waltrip, and N.M. Oldham. Uncertainty analysis for four terminal-pair capacitance and dissipation factor characterization at 1 and 10 MHz; *T-IM Apr 00* 346-348

Koffman, A.D., *see* Avramov-Zamurovic, S., *T-IM Apr 00* 398-404

Kollar, I., *see* Nemeth, J.G., *T-IM Dec 00* 1260-1263

Kot, A.C., *see* Patra, J.C., *T-IM Aug 00* 829-834

Kot-Nawrocki, E.P., J. Dusza, F. Mugarra, and V. Serradell. Generation of multidimensional random pulses for radioactivity measurements; *T-IM Aug 00* 754-761

Kraszewski, A.W., *see* Trabelsi, S., *T-IM Feb 00* 56-60

Kraszewski, A.W., *see* Nelson, S.O., *T-IM Jun 00* 470-475

Kuan Chieh-Hsiun, *see* Chun-Yu Chen, *T-IM Feb 00* 77-82

Kuji, S., *see* Sato, K., *T-IM Feb 00* 19-24

Kumar, A., and M. Tabib-Azar. Comments on "Evanescent microwaves: A novel super-resolution noncontact nondestructive imaging technique for biological applications" [with reply]; *T-IM Dec 00* 1358

Kuroda, K., *see* Kobayashi, I., *T-IM Aug 00* 762-765

Kuster, N., *see* Pokovic, K., *T-IM Aug 00* 873-878

L

Laitinen, H., *see* Kalliola, K., *T-IM Apr 00* 439-448

Laiz, H., *see* Kampik, M., *T-IM Apr 00* 429-433

Landi, C., *see* Bucci, G., *T-IM Aug 00* 884-889

Landi, C., *see* Bucci, G., *T-IM Oct 00* 1009-1017

Landi, C., *see* Bucci, G., *T-IM Dec 00* 1154-1166

Landi, C., *see* De Bonitatibus, A., *T-IM Dec 00* 1337-1343

Lang, S.Y.T., and Y. Fu. Visual measurement of orientation error for a mobile robot; *T-IM Dec 00* 1344-1357

La Paglia, G., *see* Cassiago, C., *T-IM Dec 00* 1206-1210

Lasserre, V., *see* Mauris, G., *T-IM Dec 00* 1201-1205

Lawrence, K.C., *see* Nelson, S.O., *T-IM Jun 00* 470-475

Lee, K.B., and R.D. Schneeman. Distributed measurement and control based on the IEEE 1451 smart transducer interface standards; *T-IM Jun 00* 621-627

Legendre, S., D. Massicotte, J. Goyette, and T.K. Bose. Wavelet-transform-based method of analysis for Lamb-wave ultrasonic NDE signals; *T-IM Jun 00* 524-530

Li, X., G. de Jong, and G.C.M. Meijer. The influence of electric-field bending on the nonlinearity of capacitive sensors; *T-IM Apr 00* 256-259

Li, Y.F., and G.L. Wang. Sensing strategies for a flexible manipulator; *T-IM Jun 00* 565-572

Libo Yuan, Limin Zhou, and Wei Jin. Fiber optic differential interferometer; *T-IM Aug 00* 779-782

Li Cheng, *see* Ke-Jun Xu, *T-IM Oct 00* 935-941

Liguori, C., *see* De Santo, M., *T-IM Oct 00* 1101-1107

Lima, A.M.N., *see* Borges, G.A., *T-IM Aug 00* 813-819

Limin Zhou, *see* Libo Yuan, *T-IM Aug 00* 779-782

Linholm, L.W., *see* Penzes, W.B., *T-IM Dec 00* 1285-1288

Lin Junxiu, *see* Changsen Sun, *T-IM Aug 00* 776-778

Liu Yili, *see* Yili Liu, *T-IM Oct 00* 980-983

Liu Zheng, *see* Gros, X.E., *T-IM Oct 00* 1083-1090

Li Xiujun, *see* Xiujun Li, *T-IM Jun 00* 531-534

Llamas, J., *see* Kelly, R., *T-IM Aug 00* 857-861

Loescharataramdee, C., *see* Kiranon, R., *T-IM Dec 00* 1176-1182

Lou, E., N.G. Durdle, V.J. Raso, and D.L. Hill. A low-power posture measurement system for the treatment of scoliosis; *T-IM Feb 00* 108-113

Lubaszewski, M., *see* Cota, E.F., *T-IM Apr 00* 223-227

Lucioni, M., *see* Bonarini, A., *T-IM Jun 00* 509-512

Lumbreras, M., *see* Sarry, F., *T-IM Aug 00* 809-812

Lu Mi, *see* Jiming Yin, *T-IM Feb 00* 120-128

M

Maccabruni, S., *see* Bregni, S., *T-IM Dec 00* 1240-1244

Macua, C., *see* Carlosena, A., *T-IM Aug 00* 783-789

Madden, W.I., *see* Niewczas, P., *T-IM Dec 00* 1254-1259

Madonna, G., A. Ferrero, M. Pirola, and U. Pisani. Testing microwave devices under different source impedance values-a novel technique for on-line measurement of source and device reflection coefficients; *T-IM Apr 00* 285-289

Malcovati, P., and F. Maloberti. An integrated microsystem for 3-D magnetic field measurements; *T-IM Apr 00* 341-345

Maloberti, F., *see* Malcovati, P., *T-IM Apr 00* 341-345

Manders, E.-J., G. Biswas, P.J. Mosterman, L.A. Barford, and R.J. Barnett. Signal interpretation for monitoring and diagnosis, a cooling system testbed; *T-IM Jun 00* 503-508

Mardiana, R., and Z. Kawasaki. Broadband radio interferometer utilizing a sequential triggering technique for locating fast-moving electromagnetic sources emitted from lightning; *T-IM Apr 00* 376-381

Marioli, D., *see* Ferrari, V., *T-IM Jun 00* 585-590

Marioli, D., *see* Bertocco, M., *T-IM Jun 00* 685-689

Mariscotti, A., and P. Pozzobon. Measurement of the internal impedance of traction rails at 50 Hz; *T-IM Apr 00* 294-299

Marjanovic, S., *see* Petrovic, P., *T-IM Feb 00* 166-171

Marjanovic, S., *see* Petrovic, P., *T-IM Dec 00* 1245-1248

Martens, O. Precise synchronous detectors with improved dynamic reserve; *T-IM Oct 00* 1046-1049

Martini, G., M. Facchini, and D. Parisi. Automatic phase stepping in fiber-optic ESPI by closed-loop gain switching; *T-IM Aug 00* 823-828

Maskell, D.L., and G.S. Woods. A frequency modulated envelope delay FSCW radar for multiple-target applications; *T-IM Aug 00* 710-715

Massa, A., *see* Pastorino, M., *T-IM Jun 00* 573-578

Massicotte, D., *see* Legendre, S., *T-IM Jun 00* 524-530

Massicotte, D., *see* Ben Slima, M., *T-IM Dec 00* 1224-1230

Mathew, K.T., *see* Raveendranath, U., *T-IM Dec 00* 1305-1312

Matlacz, J., and D. Palmer. Using offset parabolic reflector antennas for free space material measurement; *T-IM Aug 00* 862-866

Mauris, G., L. Berrah, L. Foulloy, and A. Haurat. Fuzzy handling of measurement errors in instrumentation; *T-IM Feb 00* 89-93

Mauris, G., E. Benoit, and L. Foulloy. Local measurement validation for an intelligent chirped-FM ultrasonic range sensor; *T-IM Aug 00* 835-839

Mauris, G., *see* Charbonnier, S., *T-IM Oct 00* 998-1003

Mauris, G., V. Lasserre, and L. Foulloy. Fuzzy modeling of measurement data acquired from physical sensors; *T-IM Dec 00* 1201-1205

Mayhew-Ridgers, G., J.W. Odendaal, and J. Joubert. Horn antenna analysis as applied to the evaluation of the gain-transfer method; *T-IM Oct 00* 949-958

McClean, I.P., A.J. Simons, C.B. Thomas, and J.E. Mutton. Comparison between thin film and bonded powder phosphors for thermographic sensing in gas turbine engines; *T-IM Feb 00* 129-131

McDonald, J.R., *see* Niewczas, P., *T-IM Dec 00* 1254-1259

McKee, J.M., and B.P. Johnson. Real-time chemical sensing of aqueous ethanol glucose mixtures; *T-IM Feb 00* 114-119

Meijer, G.C.M., *see* Li, X., *T-IM Apr 00* 256-259

Meijer, G.C.M., *see* de Jong, P.C., *T-IM Apr 00* 365-370

Meijer, G.C.N., *see* Xiujun Li, *T-IM Jun 00* 531-534

Melnikov, V.E., *see* Platonov, A.A., *T-IM Oct 00* 1018-1022

Michaeli, L., *see* Grimaldi, D., *T-IM Feb 00* 154-160

Michalski, A. Dry calibration procedure of electromagnetic flowmeter for open channels; *T-IM Apr 00* 434-438

Michie, W.C., *see* Niewczas, P., *T-IM Dec 00* 1254-1259

Migliore, M.D., F. Soldovieri, and R. Pierri. Far-field antenna pattern estimation from near-field data using a low-cost amplitude-only measurement setup; *T-IM Feb 00* 71-76

Miki, Y., *see* Shiota, F., *T-IM Oct 00* 1117-1121

Mi Lu, *see* Jiming Yin, *T-IM Feb 00* 120-128

Morawski, R.Z., *see* Wisniewski, M.P., *T-IM Feb 00* 43-48

Morawski, R.Z., *see* Sprzeczak, P., *T-IM Apr 00* 449-454

Morawski, R.Z., *see* Niedzinski, C., *T-IM Jun 00* 637-642

Morawski, R.Z., *see* Ben-Slima, M., *T-IM Dec 00* 1224-1230

Morokuma, T., *see* Shiota, F., *T-IM Oct 00* 1117-1121

Mosterman, P.J., *see* Manders, E.-J., *T-IM Jun 00* 503-508

Mugarra, F., *see* Kot-Nawrocki, E.P., *T-IM Aug 00* 754-761

Muscas, C., *see* Ferrero, A., *T-IM Apr 00* 382-387

Mutton, J.E., *see* McClean, I.P., *T-IM Feb 00* 129-131

N

Nagahata, H., *see* Tanimoto, Y., *T-IM Jun 00* 666-670

Nagasawa, T., *see* Watanabe, K., *T-IM Jun 00* 679-684

Nakayama, M., *see* Watanabe, K., *T-IM Jun 00* 679-684

Nakayama, M., *see* Yili Liu, *T-IM Oct 00* 980-983

Narduzzi, C., *see* Bertocco, M., *T-IM Feb 00* 83-86

Narduzzi, C., *see* Gori, S., *T-IM Dec 00* 1211-1215

Narduzzi, C., *see* Bertocco, M., *T-IM Dec 00* 1267-1271

Nastran, J., *see* Zajec, P., *T-IM Aug 00* 790-794

Negreiros, M., *see* Cota, E.F., *T-IM Apr 00* 223-227

Nelson, S.O., *see* Trabelsi, S., *T-IM Feb 00* 56-60

Nelson, S.O., A.W. Kraszewski, S. Trabelsi, and K.C. Lawrence. Using cereal grain permittivity for sensing moisture content; *T-IM Jun 00* 470-475

Nemeth, J.G., B. Vargha, and I. Kollar. Online frequency domain system identification based on a virtual instrument; *T-IM Dec 00* 1260-1263

Neri, B., *see* Ciofi, C., *T-IM Jun 00* 546-549

Neveux, P., E. Sekko, and G. Thomas. A constrained iterative deconvolution technique with an optimal filtering: application to a hydrocarbon concentration sensor; *T-IM Aug 00* 852-856

Newman, D., *see* Baroni, G., *T-IM Jun 00* 476-482

Nezu, Y., *see* Shiota, F., *T-IM Oct 00* 1117-1121

Nicolics, J., *see* Didosyan, Y.S., *T-IM Feb 00* 14-18

Nicolics, J., *see* Hauser, H., *T-IM Jun 00* 648-652

Niedzinski, C., and R.Z. Morawski. Bayesian approach to spectrophotometric analysis of multicomponent substances; *T-IM Jun 00* 637-642

Niewczas, P., A. Cruden, W.C. Michie, W.I. Madden, and J.R. McDonald. Error analysis of an optical current transducer operating with a digital signal processing system; *T-IM Dec 00* 1254-1259

Nishio, M., *see* Sato, K., *T-IM Feb 00* 19-24

Nunzi, E., *see* Carbone, P., *T-IM Jun 00* 555-558

O

Ocera, G., *see* Bucci, G., *T-IM Oct 00* 1009-1017

Odendaal, J.W., *see* Mayhew-Ridgers, G., *T-IM Oct 00* 949-958

Offelli, C., *see* Benetazzo, L., *T-IM Apr 00* 349-356

Oksman, J., *see* Boubal, O., *T-IM Aug 00* 890-895

Oldham, N.M., *see* Koffman, A.D., *T-IM Apr 00* 346-348

Oldham, N.M., *see* Avramov-Zamurovic, S., *T-IM Apr 00* 398-404

Osowski, S., and K. Brudzewski. Fuzzy self-organizing hybrid neural network for gas analysis system; *T-IM Apr 00* 424-428

Ottoboni, M., *see* Svelto, C., *T-IM Jun 00* 550-554

Ouslimani, A., *see* Hafdallah, H., *T-IM Feb 00* 172-177

Ovaska, S.J., *see* Zhang, J.Q., *T-IM Dec 00* 1194-1200

Overney, F., B. Jeanneret, and M. Furlan. A tunable vacuum-gap cryogenic coaxial capacitor; *T-IM Dec 00* 1326-1330

Ozawa, T., *see* Watanabe, K., *T-IM Jun 00* 679-684

Ozdemir, S.K., S. Takamiya, S. Ito, S. Shinohara, and H. Yoshida. Self-mixing laser speckle velocimeter for blood flow measurement; *T-IM Oct 00* 1029-1035

P

Paglierani, P., *see* Bertocco, M., *T-IM Feb 00* 83-86

Paglierani, P., *see* Benetazzo, L., *T-IM Apr 00* 413-417

Paglierani, P., *see* Bertocco, M., *T-IM Dec 00* 1267-1271

Pallas-Areny, R., *see* Chimene, M.F., *T-IM Jun 00* 535-540

Palmer, D., *see* Matlacz, J., *T-IM Aug 00* 862-866

Palmisano, G., *see* Giustolisi, G., *T-IM Feb 00* 137-143

Palumbo, A., *see* Grimaldi, D., *T-IM Feb 00* 154-160

Palumbo, G., *see* Giustolisi, G., *T-IM Feb 00* 137-143

Panda, G., *see* Dash, P.K., *T-IM Aug 00* 746-753

Panda, G., *see* Patra, J.C., *T-IM Aug 00* 829-834

Parisi, D., *see* Martini, G., *T-IM Aug 00* 823-828

Parvis, M., *see* Benetazzo, L., *T-IM Apr 00* 349-356

Parvis, M., *see* Carullo, A., *T-IM Apr 00* 371-375

Pasquet, D., *see* Bourdel, E., *T-IM Oct 00* 1023-1028

Pastorino, M., A. Massa, and S. Caorsi. A microwave inverse scattering technique for image reconstruction based on a genetic algorithm; *T-IM Jun 00* 573-578

Patra, J.C., A.C. Kot, and G. Panda. An intelligent pressure sensor using neural networks; *T-IM Aug 00* 829-834

Pedotti, A., *see* Baroni, G., *T-IM Jun 00* 476-482

Pedraza-Contreras, J., *see* Gutierrez-Martinez, C., *T-IM Feb 00* 32-36

Pejic, D., and V. Vujicic. Accuracy limit of high-precision stochastic watt-hour meter; *T-IM Jun 00* 617-620

Penzes, W.B., R.A. Allen, M.W. Cresswell, L.W. Linholm, and E.C. Teague. A new method to measure the distance between graduation lines on graduated scales; *T-IM Dec 00* 1285-1288

Pereira, J.M.D., O. Postolache, P.M.B.S. Girao, and M. Cretu. Minimizing temperature drift errors of conditioning circuits using artificial neural networks; *T-IM Oct 00* 1122-1127

Peretto, L., R. Sasdelli, and G. Serra. Measurement of harmonic losses in transformers supplying nonsinusoidal load currents; *T-IM Apr 00* 315-319

Peruzzo, S., *see* Fiorentin, P., *T-IM Apr 00* 290-293

Petchakit, W., *see* Kiranon, R., *T-IM Dec 00* 1176-1182

Petri, D., *see* Bertocco, M., *T-IM Feb 00* 83-86

Petri, D., *see* Carbone, P., *T-IM Apr 00* 333-336

Petri, D., *see* Carbone, P., *T-IM Apr 00* 337-340

Petri, D., *see* Carbone, P., *T-IM Jun 00* 555-558

Petriu, E.M., *see* Das, S.R., *T-IM Jun 00* 690-705

Petriu, E.M., *see* Spoelder, H.J.W., *T-IM Dec 00* 1331-1336

Petrovic, P., S. Marjanovic, and M.R. Stevanovic. New algorithm for measuring 50/60 Hz AC values based on the usage of slow A/D converters; *T-IM Feb 00* 166-171

Petrovic, P., S. Marjanovic, and M. Stevanovic. Measuring of slowly changing AC signals without sample-and-hold circuit; *T-IM Dec 00* 1245-1248

Pettersson, M., *see* Handel, P., *T-IM Oct 00* 1063-1068

Pierri, R., *see* Migliore, M.D., *T-IM Feb 00* 71-76

Pietrosanto, A., *see* Betta, G., *T-IM Feb 00* 25-29

Pietrosanto, A., *see* Betta, G., *T-IM Feb 00* 100-107

Pietrosanto, A., *see* Betta, G., *T-IM Oct 00* 1004-1008

Pietrosanto, A., *see* De Santo, M., *T-IM Oct 00* 1101-1107

Pineda de Gyvez, J., *see* Jiming Yin, *T-IM Feb 00* 120-128

Pintelon, R., *see* Vandersteen, G., *T-IM Dec 00* 1282-1284

Pintelon, R.M., *see* Schoukens, J., *T-IM Apr 00* 275-278

Pirola, M., *see* Madonna, G., *T-IM Apr 00* 285-289

Pisani, U., *see* Madonna, G., *T-IM Apr 00* 285-289

Pitrone, N., *see* Ando, B., *T-IM Oct 00* 1137-1143

Piuri, V., *see* Benetazzo, L., *T-IM Apr 00* 349-356

Piuri, V., *see* Alippi, C., *T-IM Jun 00* 559-564

Platonov, A.A., J. Szabatin, and V.E. Melnikov. Miniaturization of sensors and influence of their thermal noise on measurement accuracy; *T-IM Oct 00* 1018-1022

Pogliano, U., G.C. Bosco, and D. Serazio. Development of a new type of electrometic AC-DC transfer standard; *T-IM Aug 00* 896-900

Pogliano, U., *see* Cassiago, C., *T-IM Dec 00* 1206-1210

Pohl, A., *see* Hauser, H., *T-IM Jun 00* 648-652

Pokovic, K., T. Schmid, and N. Kuster. Millimeter-resolution E-field probe for isotropic measurement in lossy media between 100 MHz and 20 GHz; *T-IM Aug 00* 873-878

Pomaro, N., *see* Fiorentin, P., *T-IM Apr 00* 290-293

Postolache, O., *see* Pereira, J.M.D., *T-IM Oct 00* 1122-1127

Pozzobon, P., *see* Mariscotti, A., *T-IM Apr 00* 294-299

Prasad, V.C., and N.S.C. Babu. Selection of test nodes for analog fault diagnosis in dictionary approach; *T-IM Dec 00* 1289-1297

Pusnik, I., *see* Bojkovski, J., *T-IM Jun 00* 596-601

R

Ranga Rao, K.S., *see* Gupta, S., *T-IM Feb 00* 66-70

Raso, V.J., *see* Lou, E., *T-IM Feb 00* 108-113
Ravassard, J.C., *see* Sandoz, P., *T-IM Aug 00* 867-872
Raveendranath, U., S. Bijukumar, and K.T. Mathew. Broadband coaxial cavity resonator for complex permittivity measurements of liquids; *T-IM Dec 00* 1305-1312
Rees, D., *see* Evans, C., *T-IM Jun 00* 602-609
Rees, D., *see* Evans, C., *T-IM Jun 00* 610-616
Rekanos, I.T., and T.D. Tsiboukis. A finite element-based technique for microwave imaging of two-dimensional objects; *T-IM Apr 00* 234-239
Richter, A., *see* Thoma, R.S., *T-IM Apr 00* 357-364
Rigotti, C., *see* Baroni, G., *T-IM Jun 00* 476-482
Riley, K.J., *see* Irons, F.H., *T-IM Jun 00* 659-665
Rinfret, R.L., *see* Filipski, P.S., *T-IM Apr 00* 279-284
Rizzi, E., *see* Benetazzo, L., *T-IM Apr 00* 413-417
Rizzi, E., *see* Bertocco, M., *T-IM Dec 00* 1267-1271
Roberts, G.W., *see* Dufort, B., *T-IM Feb 00* 188-199
Rodella, R., *see* Sansoni, G., *T-IM Jun 00* 628-636
Rodriguez, J., *see* Vountesmeri, V., *T-IM Jun 00* 513-516
Rodriguez-Asomoza, J., *see* Gutierrez-Martinez, C., *T-IM Feb 00* 32-36
Rolain, Y.J., *see* Schoukens, J., *T-IM Apr 00* 275-278
Rollin, J.J., *see* Roy, L., *T-IM Apr 00* 409-412
Roussel, A., *see* Bourdel, E., *T-IM Oct 00* 1023-1028
Routray, A., *see* Dash, P.K., *T-IM Aug 00* 746-753
Roy, L., J.J. Rollin, and G. Arcari. Measurement of IC package shielding effectiveness using an integrated antenna; *T-IM Apr 00* 409-412
Rubinacci, G., *see* Bernieri, A., *T-IM Apr 00* 455-459
Rucki, Z., *see* Szczepanik, Z., *T-IM Aug 00* 844-851
Rudd, E.P. Laser diode driver with 5-decade range; *T-IM Feb 00* 2-4
Russo, F. Noise removal from image data using recursive neurofuzzy filters; *T-IM Apr 00* 307-314

S

Sagnard, F., A. Berthault, and B. Veron. The microwave measurement of the conductivity of a small fiber with an open cavity; *T-IM Oct 00* 942-948
Samori, C., *see* Zappa, F., *T-IM Dec 00* 1167-1175
Sampietro, N., G. Accomando, L.G. Fasoli, G. Ferrari, and E.C. Gatti. High sensitivity noise measurement with a correlation spectrum analyzer; *T-IM Aug 00* 820-822
Sanchez-Rinza, B., *see* Gutierrez-Martinez, C., *T-IM Feb 00* 32-36
Sandoz, P., J.C. Ravassard, S. Dembele, and A. Janex. Phase-sensitive vision technique for high accuracy position measurement of moving targets; *T-IM Aug 00* 867-872
Sangpisit, W., *see* Kiranon, R., *T-IM Dec 00* 1176-1182
Sansoni, G., M. Carocci, and R. Rodella. Calibration and performance evaluation of a 3-D imaging sensor based on the projection of structured light; *T-IM Jun 00* 628-636
Saranovac, L.V. Digital realization of frequency insensitive phase shifter for reactive Var-Hour meters; *T-IM Aug 00* 802-808
Sarry, F., and M. Lumbreras. Gas discrimination in an air-conditioned system; *T-IM Aug 00* 809-812
Sasdelli, R., *see* Peretto, L., *T-IM Apr 00* 315-319
Sasdelli, R., G. Del Gobbo, and G. Iuculano. Quality management for electricity as a processed material; *T-IM Apr 00* 460-467
Sato, H., and K. Watanabe. Experimental study on the use of a vortex whistle as a flowmeter; *T-IM Feb 00* 200-205
Sato, K., T. Hara, S. Kuji, K. Asari, M. Nishio, and N. Kawano. Development of an ultrastable fiber optic frequency distribution system using an optical delay control module [for frequency standard and VLBI]; *T-IM Feb 00* 19-24
Sauck, W., *see* Werkema, D.D., *T-IM Dec 00* 1249-1253
Savino, M., *see* Attivissimo, F., *T-IM Oct 00* 1036-1042
Scaglione, A., *see* Betta, G., *T-IM Oct 00* 1004-1008
Scalise, A., *see* Caslellini, P., *T-IM Oct 00* 924-928
Scalise, L., *see* Caslellini, P., *T-IM Oct 00* 924-928
Scharcanski, J., and C.T.J. Dodson. Stochastic texture image estimators for local spatial anisotropy and its variability; *T-IM Oct 00* 971-979
Schmid, T., *see* Pokovic, K., *T-IM Aug 00* 873-878
Schneeman, R.D., *see* Lee, K.B., *T-IM Jun 00* 621-627
Schneider, A., *see* Thoma, R.S., *T-IM Apr 00* 357-364
Schoonees, J.A., *see* Holdem, J.R., *T-IM Oct 00* 964-970
Schoukens, J., *see* Simon, G., *T-IM Apr 00* 270-274
Schoukens, J., R.M. Pintelon, and Y.J. Rolain. Broadband versus stepped sine FRF measurements; *T-IM Apr 00* 275-278
Scotti, F., *see* Alippi, C., *T-IM Jun 00* 559-564
Seet, H.L., *see* Tan, K.K., *T-IM Oct 00* 984-991
Sekko, E., *see* Neveux, P., *T-IM Aug 00* 852-856
Serazio, D., *see* Pogliano, U., *T-IM Aug 00* 896-900
Serra, G., *see* Peretto, L., *T-IM Apr 00* 315-319
Serradell, V., *see* Kot-Nawrocki, E.P., *T-IM Aug 00* 754-761
Shah, N., *see* Giakos, G.C., *T-IM Apr 00* 300-306
Shida, K., *see* Kimoto, A., *T-IM Jun 00* 591-595
Shida, K., *see* Yuji, J., *T-IM Oct 00* 1091-1094
Shinohara, S., *see* Ozdemir, S.K., *T-IM Oct 00* 1029-1035
Shiota, F., Y. Miki, Y. Fujii, T. Morokuma, and Y. Nezu. Evaluation of equilibrium trajectory of superconducting magnetic levitation system for the future kg unit of mass; *T-IM Oct 00* 1117-1121
Siche, J.P., *see* Charbonnier, S., *T-IM Oct 00* 998-1003
Siegel, M., *see* Huadong Wu, *T-IM Jun 00* 493-497
Simon, G., and J. Schoukens. Robust broadband periodic excitation design; *T-IM Apr 00* 270-274
Simons, A.J., *see* McClean, I.P., *T-IM Feb 00* 129-131
Simova, E., *see* Zhu, Y., *T-IM Dec 00* 1231-1239
Singh, R., and T. Kawakami. New technique for measuring low fiber-optic attenuation using double square-law detection; *T-IM Feb 00* 30-31
Sirotic, I., *see* Donlagic, D., *T-IM Oct 00* 1095-1100
Skoglund, M., *see* Handel, P., *T-IM Oct 00* 1063-1068
Slima, M.B., *see* Barwicz, A., *T-IM Jun 00* 541-545
Slomovitz, D. Electronic error reduction system for clamp-on probes and measuring current transformers; *T-IM Dec 00* 1278-1281
Smetana, W., *see* Brasseur, G., *T-IM Oct 00* 1108-1111
So, E., *see* Djokic, B., *T-IM Feb 00* 161-165
Soldovieri, F., *see* Migliore, M.D., *T-IM Feb 00* 71-76
Sommerkorn, G., *see* Thoma, R.S., *T-IM Apr 00* 357-364
Song Chen, *see* Yili Liu, *T-IM Oct 00* 980-983
Spinelli, P., *see* Carullo, A., *T-IM Apr 00* 371-375
Spoelder, H.J.W., F.M. Vos, E.M. Petriu, and F.C.A. Groen. Some aspects of pseudo random binary array-based surface characterization; *T-IM Dec 00* 1331-1336
Sprzeczak, P., and R.Z. Morawski. Calibration of a spectrometer using a genetic algorithm; *T-IM Apr 00* 449-454
Steindl, R., *see* Hauser, H., *T-IM Jun 00* 648-652
Stevanovic, M., *see* Petrovic, P., *T-IM Dec 00* 1245-1248
Stevanovic, M.R., *see* Petrovic, P., *T-IM Feb 00* 166-171
Sun Changsen, *see* Changsen Sun, *T-IM Aug 00* 776-778
Svelto, C., M. Ottoboni, and A.M. Ferrero. Optically-supplied voltage transducer for distorted signals in high-voltage systems; *T-IM Jun 00* 550-554
Szabatin, J., *see* Platonov, A.A., *T-IM Oct 00* 1018-1022
Szczecinski, L.L., *see* Ben Slima, M., *T-IM Dec 00* 1224-1230
Szczepanik, Z., and Z. Rucki. Frequency analysis of electrical impedance tomography system; *T-IM Aug 00* 844-851
Szplet, R., J. Kalisz, and R. Szymanowski. Interpolating time counter with 100 ps resolution on a single FPGA device; *T-IM Aug 00* 879-883
Szymanowski, R., *see* Szplet, R., *T-IM Aug 00* 879-883

T

Tabib-Azar, M., *see* Kumar, A., *T-IM Dec 00* 1358
Tadic, N. Resistive mirror with the current-mode approach in bipolar technology; *T-IM Feb 00* 132-136
Tadic, N., and D. Gobovic. Self-balancing linear bridge circuits with resistive mirrors for resistance measurement; *T-IM Dec 00* 1318-1325
Takamiya, S., *see* Ozdemir, S.K., *T-IM Oct 00* 1029-1035
Takechi, H., *see* Tanimoto, Y., *T-IM Jun 00* 666-670
Tan, K.K., S.N. Huang, and H.L. Seet. Geometrical error compensation of precision motion systems using radial basis function; *T-IM Oct 00* 984-991
Tancrede, P., *see* Barwicz, A., *T-IM Jun 00* 541-545
Tanimoto, Y., H. Takechi, H. Nagahata, and H. Yamamoto. Pressure measurement of air cushions for SCI patients; *T-IM Jun 00* 666-670
Taroni, A., *see* Ferrari, V., *T-IM Jun 00* 585-590
Taroni, A., *see* Bertocco, M., *T-IM Jun 00* 685-689
Tasic, T., *see* Bojkovski, J., *T-IM Jun 00* 596-601
Tay, S.T., *see* Yeo, S.P., *T-IM Feb 00* 61-65
Teague, E.C., *see* Penzes, W.B., *T-IM Dec 00* 1285-1288
Thoma, R.S., D. Hampicke, A. Richter, G. Sommerkorn, A. Schneider, U. Trautwein, and W. Wirnitzer. Identification of time-variant directional mobile radio channels; *T-IM Apr 00* 357-364
Thomas, C.B., *see* McClean, I.P., *T-IM Feb 00* 129-131
Thomas, G., *see* Neveux, P., *T-IM Aug 00* 852-856
Tobben, H., and M. Karbsek. Experimental and numerical results of optical preamplification in a laser Doppler anemometer receiving head; *T-IM Feb 00* 10-13
Trabelsi, S., A.W. Kraszewski, and S.O. Nelson. Phase-shift ambiguity in microwave dielectric properties measurements; *T-IM Feb 00* 56-60
Trabelsi, S., *see* Nelson, S.O., *T-IM Jun 00* 470-475
Trautwein, U., *see* Thoma, R.S., *T-IM Apr 00* 357-364
Trotta, A., *see* Attivissimo, F., *T-IM Oct 00* 1036-1042
Trzaska, H. Calibration of directional antennas and limitations in their use; *T-IM Oct 00* 1112-1116
Tsiboukis, T.D., *see* Rekanos, I.T., *T-IM Apr 00* 234-239
Tsukada, K., *see* Gros, X.E., *T-IM Oct 00* 1083-1090

U

Urbanczyk, W., *see* Bock, W.J., *T-IM Apr 00* 392-397

V

Vainikainen, P., *see* Kalliola, K., *T-IM Apr 00* 439-448
Vallan, A., *see* Carullo, A., *T-IM Apr 00* 371-375
Vandersteen, G., and R. Pintelon. Maximum likelihood estimator for jitter noise models; *T-IM Dec 00* 1282-1284
Vargha, B., *see* Nemeth, J.G., *T-IM Dec 00* 1260-1263
Vaskelainen, L.I., *see* Kalliola, K., *T-IM Apr 00* 439-448
Vernet, G., *see* Hafdallah, H., *T-IM Feb 00* 172-177
Veron, B., *see* Sagnard, F., *T-IM Oct 00* 942-948
Villone, F., *see* Bernieri, A., *T-IM Apr 00* 455-459
Vos, F.M., *see* Spoelder, H.J.W., *T-IM Dec 00* 1331-1336
Vountesmeri, V., and J. Rodriguez. Magnetoresistive power sensor for measurement in situ of RF power absorbed by tissue; *T-IM Jun 00* 513-516
Vujicic, V., *see* Pejic, D., *T-IM Jun 00* 617-620
Vukicevic, N., *see* Kitching, J., *T-IM Dec 00* 1313-1317
Vyavahare, P.D., *see* Acharya, Y.B., *T-IM Feb 00* 5-9
Vyroubal, D. Frequency insensitive phase detector with fast response and very low output ripple; *T-IM Oct 00* 1077-1082

W

Walter, E., *see* Brahim-Belhouari, S., *T-IM Jun 00* 653-658
Waltrip, B.C., *see* Koffman, A.D., *T-IM Apr 00* 346-348
Waltrip, B.C., *see* Avramov-Zamurovic, S., *T-IM Apr 00* 398-404
Wang, C., and R.X. Gao. A virtual instrumentation system for integrated bearing condition monitoring; *T-IM Apr 00* 325-332
Wang, G.L., *see* Li, Y.F., *T-IM Jun 00* 565-572
Watanabe, K., *see* Sato, H., *T-IM Feb 00* 200-205
Watanabe, K., T. Yamaguchi, M. Nakayama, Yi-Zhu Gao, T. Nagasawa, and T. Ozawa. A high-sensitivity particle monitor using an integration sphere; *T-IM Jun 00* 679-684
Watanabe, K., *see* Yili Liu, *T-IM Oct 00* 980-983
Weidmann, W., *see* Kitching, J., *T-IM Dec 00* 1313-1317
Wei Jin, *see* Libo Yuan, *T-IM Aug 00* 779-782
Wei-Lun Juang, *see* Chung-Ping Young, *T-IM Jun 00* 579-584
Weiss, M., and R. Knochel. A novel method of determining the permittivity of liquids; *T-IM Jun 00* 488-492
Welander, P., M. Barmatz, and I. Hahn. A new small nano-Kelvin resolution thermometer for low-temperature experiments; *T-IM Apr 00* 253-255
Weon-Ki Yoon, and M.J. Devaney. Reactive power measurement using the wavelet transform; *T-IM Apr 00* 246-252
Werkema, D.D., E. Atekwana, W. Sauck, and J.A. Asumadu. A generic automated/semiautomated digital multi-electrode instrument for field resistivity measurements; *T-IM Dec 00* 1249-1253
Whorton, M.S., *see* Hampton, R.D., *T-IM Apr 00* 265-269
Wirnitzer, W., *see* Thoma, R.S., *T-IM Apr 00* 357-364
Wisniewski, M.P., R.Z. Morawski, and A. Barwicz. Using rational filters for digital correction of a spectrometric microtransducer; *T-IM Feb 00* 43-48
Wong, M.W.-T. On the issues of oscillation test methodology; *T-IM Apr 00* 240-245
Wood, B., *see* Inglis, D., *T-IM Dec 00* 1358-1359
Woods, G.S., *see* Maskell, D.L., *T-IM Aug 00* 710-715
Wu, K.-D., and H.-L. Jou. An orthogonal peak detector for multiphase sinusoidal signals; *T-IM Dec 00* 1216-1223
Wu Huadong, *see* Huadong Wu, *T-IM Jun 00* 493-497
Wu-Shiung Feng, *see* Cheng-Chung Hsu, *T-IM Oct 00* 929-934
Wynands, R., *see* Kitching, J., *T-IM Dec 00* 1313-1317

X

Xiaoge Yu, *see* Changsen Sun, *T-IM Aug 00* 776-778
Xie, T., *see* Kang, H., *T-IM Apr 00* 228-233
Xiong, S., and Z. Zhou. A complex nonlinear exponential autoregressive model approach to shape recognition using neural networks; *T-IM Dec 00* 1298-1304
Xiujun Li, and G.C.N. Meijer. Elimination of shunting conductance effects in a low-cost capacitive-sensor interface; *T-IM Jun 00* 531-534
Xu Ke-Jun, *see* Ke-Jun Xu, *T-IM Oct 00* 935-941

Y

Yamaguchi, T., *see* Watanabe, K., *T-IM Jun 00* 679-684
Yamamoto, H., *see* Tanimoto, Y., *T-IM Jun 00* 666-670
Yang, Q., *see* Kang, H., *T-IM Apr 00* 228-233
Yanhua, Y., *see* Zhu, R., *T-IM Dec 00* 1183-1188
Yasuda, B.J., *see* Alam, M.S., *T-IM Oct 00* 915-923
Yeo, S.P., and S.T. Tay. Improved design for multistate reflectometer (with two power detectors) for measuring reflection coefficients of microwave devices; *T-IM Feb 00* 61-65
Yi, B., C.B. Chu, K.S. Chiang, and H.S.H. Chung. New design of optical electric-current sensor for sensitivity improvement; *T-IM Apr 00* 418-423
Yili Liu, Song Chen, M. Nakayama, and K. Watanabe. Limitations of a relaxation oscillator in capacitance measurements; *T-IM Oct 00* 980-983
Yin Jiming, *see* Jiming Yin, *T-IM Feb 00* 120-128
Yi-Zhu Gao, *see* Watanabe, K., *T-IM Jun 00* 679-684
Yoon Weon-Ki, *see* Weon-Ki Yoon, *T-IM Apr 00* 246-252
Yoshida, H., *see* Ozdemir, S.K., *T-IM Oct 00* 1029-1035
Young Chung-Ping, *see* Chung-Ping Young, *T-IM Jun 00* 579-584
Yuan Libo, *see* Libo Yuan, *T-IM Aug 00* 779-782
Yuji, J., and K. Shida. A new multifunctional tactile sensing technique by selective data processing; *T-IM Oct 00* 1091-1094
Yu Xiaoge, *see* Changsen Sun, *T-IM Aug 00* 776-778

Z

Zajec, P., and J. Nastran. Power calibrator using switched mode voltage source; *T-IM Aug 00* 790-794
Zappa, F., M. Ghioni, S. Cova, C. Samori, and A.C. Giudice. An integrated active-quenching circuit for single-photon avalanche diodes; *T-IM Dec 00* 1167-1175
Zavrsnik, M., *see* Donlagic, D., *T-IM Oct 00* 1095-1100
Zhang, J.Q., and S.J. Ovaska. An adaptive window function method for power measurement; *T-IM Dec 00* 1194-1200
Zheng Liu, *see* Gros, X.E., *T-IM Oct 00* 1083-1090
Zhou, Z., *see* Xiong, S., *T-IM Dec 00* 1298-1304
Zhou Limin, *see* Libo Yuan, *T-IM Aug 00* 779-782
Zhu, R., Y. Yanhua, and Q. Bao. A novel intelligent strategy for improving measurement precision of FOG; *T-IM Dec 00* 1183-1188
Zhu, Y., E. Simova, P. Berini, and C. Grover. A comparison of wavelength dependent polarization dependent loss measurement in fiber gratings; *T-IM Dec 00* 1231-1239
Zielinski, M. Digital gated single-particle counting system, the errors analysis; *T-IM Oct 00* 1069-1076
Zinkernagel, J. A current-to-voltage converter for 5 A to 5 V and 30 Hz to 30 kHz; *T-IM Feb 00* 144-150
Zivanovic, M., *see* Carlosena, A., *T-IM Aug 00* 783-789
Zoughi, R., *see* Bois, K.J., *T-IM Feb 00* 49-55

SUBJECT INDEX

A

Absorbing media
lossy media isotropic meas., MM-resoln. E-field probe, 100 MHz-20 GHz. *Pokovic, K., +, T-IM Aug 00* 873-878
Acceleration measurement
coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497
hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A., +, T-IM Apr 00* 388-391
Accelerometers
ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S., +, T-IM Oct 00* 998-1003
coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497
Access protocols; cf. Time division multiple access
AC-DC power converters
AC-DC transfer calib., automated syst. *Filipski, P.S., +, T-IM Apr 00* 279-284
Acoustic applications; cf. Ultrasonic applications
Acoustic devices; cf. Acoustic resonators
Acoustic resonance
1D acoustical gas resonator for fluid level meas. *Donlagic, D., +, T-IM Oct 00* 1095-1100
Acoustic resonators
1D acoustical gas resonator for fluid level meas. *Donlagic, D., +, T-IM Oct 00* 1095-1100
Acoustic signal detection
vortex whistle, freq.-detecting flowmeter use, fluidic oscillator. *Sato, H., +, T-IM Feb 00* 200-205

+ Check author entry for coauthors

Acoustic signal processing
coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497
knock acoustic sig. estim. using parametric inversion. *Boubal, O., +, T-IM Aug 00* 890-895
Acoustic signal processing; cf. Surface acoustic wave signal processing
Acoustic transducers; cf. Surface acoustic wave transducers
Acoustic variables measurement; cf. Ultrasonic measurement
Acoustic waves; cf. Surface acoustic waves
Acoustoelectric transducers; cf. Microphones
Active filters
IC testing by oscill. test methodology. *Wong, M.W.-T., T-IM Apr 00* 240-245
Active filters; cf. Biquadratic filters
Active networks
integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F., +, T-IM Dec 00* 1167-1175
lin. ccts., resistor-induced thermal noise, generalization. *Giannetti, R., T-IM Feb 00* 87-88
power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P., +, T-IM Aug 00* 790-794
Active networks; cf. Active filters
Active vision
3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G., +, T-IM Jun 00* 628-636
Adaptive filters
adaptive analog test and diagnosis syst. *Cota, E.F., +, T-IM Apr 00* 223-227
Adaptive filters; cf. Adaptive Kalman filters
Adaptive Kalman filters
blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A., +, T-IM Jun 00* 541-545
Adaptive signal processing
some aspects of pseudo random binary array-based surface charactn. *Spoelder, H.J.W., +, T-IM Dec 00* 1331-1336
Adaptive signal processing; cf. Space-time adaptive processing
Adaptive systems
3D objs. automatic acquisition, portable modular syst. *Borghese, N.A., +, T-IM Oct 00* 1128-1136
Adaptive systems; cf. Adaptive filters
Aerospace control
microgravity isolation, implicit freq. weighting. *Hampton, R.D., +, T-IM Apr 00* 265-269
Aerospace instrumentation
nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P., +, T-IM Apr 00* 253-255
Aerospace test facilities
multifactorial movement anal. in weightlessness. *Baroni, G., +, T-IM Jun 00* 476-482
Aerospace testing; cf. Aircraft testing
Agriculture
moisture content determ. in cereal grain, microwave/dielec. props. meas. *Nelson, S.O., +, T-IM Jun 00* 470-475
Air conditioning
electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F., +, T-IM Aug 00* 809-812
Aircraft; cf. Aircraft testing
Aircraft testing
coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497
Air pollution; cf. Air pollution control; Air pollution measurement
Air pollution control
hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., +, T-IM Aug 00* 852-856
Air pollution measurement
dust monitor using integrat. sphere, real-time meas. *Watanabe, K., +, T-IM Jun 00* 679-684
electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F., +, T-IM Aug 00* 809-812
flue gas flow meas. using neural networks, sens. locations optim. *Kang, H., +, T-IM Apr 00* 228-233
gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S., +, T-IM Apr 00* 424-428
Alarm systems
opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42
smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062
Algorithm theory; cf. Computational complexity; Deterministic algorithms
Alkali metals; cf. Cesium; Sodium
Alloys; cf. Boron alloys; Silicon alloys
Aluminum
accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F., +, T-IM Aug 00* 716-720
Amorphous magnetic materials
FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H., +, T-IM Jun 00* 648-652
Amorphous state; cf. Amorphous magnetic materials
Amplifiers; cf. Current mirrors; Differential amplifiers; Feedback amplifiers; Operational amplifiers; Optical fiber amplifiers; Preamplifiers
Amplitude estimation
multifreq. sig. param., freq.-domain-based least sq. estim. *Carbone, P., +, T-IM Jun 00* 555-558
Analog circuits
adaptive analog test and diagnosis syst. *Cota, E.F., +, T-IM Apr 00* 223-227
IC testing by oscill. test methodology. *Wong, M.W.-T., T-IM Apr 00* 240-245
lin. ccts., resistor-induced thermal noise, generalization. *Giannetti, R., T-IM Feb 00* 87-88
selection of test nodes for analog fault diagnosis in dictionary approach. *Prasad, V.C., +, T-IM Dec 00* 1289-1297
self-balancing lin. bridge ccts. with resistive minors for resistance meas. *Tadic, N., +, T-IM Dec 00* 1318-1325
Analog circuits; cf. Analog processing circuits
Analog-digital conversion
AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P., +, T-IM Feb 00* 166-171
ADC with piecewise linear characteristic, case study-implementation of smart humidity sensor. *Bucci, G., +, T-IM Dec 00* 1154-1166
elec. instrum. calib., nonsinusoidal conditions, test waveform selection. *Ferrero, A., +, T-IM Apr 00* 382-387
error anal. of opt. current transducer operating with digital signal proc. syst. *Niewczas, P., +, T-IM Dec 00* 1254-1259
HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C., +, T-IM Jun 00* 550-554
interpolating time counter, single FPGA device, 100 ps resoln. *Szplet, R., +, T-IM Aug 00* 879-883
lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S., T-IM Feb 00* 151-153
noise power ratio testing, mid-riser formulation. *Irons, F.H., +, T-IM Jun 00* 659-665
resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., +, T-IM Jun 00* 585-590
stochastic watthour meter, high-precision, accuracy limit. *Pejic, D., +, T-IM Jun 00* 617-620
Analog-digital conversion; cf. Quantization (signal); Sigma-delta modulation
Analog integrated circuits; cf. Bipolar analog integrated circuits
Analog multipliers
resistive-mirror-based voltage-controlled resistor, bipolar technol. *Tadic, N., T-IM Feb 00* 132-136
Analog processing circuits
arbitrary power law device based on integrators. *Kiranon, R., +, T-IM Dec 00* 1176-1182
Analog processing circuits; cf. Analog multipliers
Analog storage; cf. Sample and hold circuits
Anemometry; cf. Laser Doppler anemometry
Angle modulation; cf. Frequency modulation
Angular measurement; cf. Angular velocity measurement
Angular velocity measurement
capacitive ang. posn. sens., virtual rotor grounding. *Brasseur, G., +, T-IM Oct 00* 1108-1111
opt. shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C., T-IM Aug 00* 795-801
Antenna arrays
time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S., +, T-IM Apr 00* 357-364
Antenna arrays; cf. Log periodic antennas
Antenna radiation patterns
directional antennas calib., errors. *Trzaska, H., T-IM Oct 00* 1112-1116
far-field antenna patt. estim. from near-field data, amplit.-only meas. *Migliore, M.D., +, T-IM Feb 00* 71-76
IC package shielding effectiveness meas., integrated antenna use. *Roy, L., +, T-IM Apr 00* 409-412
Antennas; cf. Antenna arrays; Antenna radiation patterns; Antenna testing; Antenna theory; Aperture antennas; Conformal antennas; Directive antennas; Microwave antennas; Mobile antennas; Receiving antennas; Television antennas
Antenna testing
directional antennas calib., errors. *Trzaska, H., T-IM Oct 00* 1112-1116

- far-field antenna patt. estim. from near-field data, amplit.-only meas. *Migliore, M.D.*, + , *T-IM Feb 00* 71-76
- horn antenna anal., gain-transfer method anal. *Mayhew-Ridgers, G.*, + , *T-IM Oct 00* 949-958

Antenna theory
- horn antenna anal., gain-transfer method anal. *Mayhew-Ridgers, G.*, + , *T-IM Oct 00* 949-958

Antialiasing
- error measures for resampled irregular data. *de Waele, S.*, + , *T-IM Apr 00* 216-222

Aperture antennas
- horn antenna anal., gain-transfer method anal. *Mayhew-Ridgers, G.*, + , *T-IM Oct 00* 949-958

Application program interfaces
- smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B.*, + , *T-IM Jun 00* 621-627

Application specific integrated circuits
- algorithmic specification of specialized processor for spectrometric appls. *Ben Slima, M.*, + , *T-IM Dec 00* 1224-1230
- high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C.*, + , *T-IM Apr 00* 365-370
- integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F.*, + , *T-IM Dec 00* 1167-1175
- multiple-stage OTA-C filters, testable design. *Cheng-Chung Hsu*, + , *T-IM Oct 00* 929-934

Application specific integrated circuits; cf. Mixed analog-digital integrated circuits

Approximation theory
- lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C.*, + , *T-IM Jun 00* 602-609

Approximation theory; cf. Least squares approximations; Mean square error methods; Polynomial approximation

Archaeology
- antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A.*, + , *T-IM Apr 00* 371-375

Arrays; cf. Antenna arrays; Ball grid arrays

Array signal processing
- electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F.*, + , *T-IM Aug 00* 809-812
- gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S.*, + , *T-IM Apr 00* 424-428
- time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S.*, + , *T-IM Apr 00* 357-364

Arsenic compounds; cf. Gallium arsenide

Art
- antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A.*, + , *T-IM Apr 00* 371-375

Artificial intelligence; cf. Generalization (artificial intelligence); Knowledge based systems; Learning (artificial intelligence); Uncertainty handling

Astronomical techniques; cf. Radioastronomical techniques

Atmospheric electricity; cf. Lightning

Atmospheric electromagnetic wave propagation
- broadband radio interferometer, seq. trigger, lightning emitted sources. *Mardiana, R.*, + , *T-IM Apr 00* 376-381

Atmospheric measuring apparatus
- broadband radio interferometer, seq. trigger, lightning emitted sources. *Mardiana, R.*, + , *T-IM Apr 00* 376-381

Atmospherics
- broadband radio interferometer, seq. trigger, lightning emitted sources. *Mardiana, R.*, + , *T-IM Apr 00* 376-381

Atomic absorption spectroscopy
- microspectrometer design, digital correction, rational filters. *Wisniewski, M.P.*, + , *T-IM Feb 00* 43-48

Atomic clocks
- microwave freq. reference based on VCSEL-driven dark line resonances in Cs vapor. *Kitching, J.*, + , *T-IM Dec 00* 1313-1317

Attenuation measurement
- low fiber opt. atten. meas. using double sq.-law detect. *Singh, R.*, + , *T-IM Feb 00* 30-31

Attitude measurement
- visual meas. of orientation error for mobile robot. *Lang, S.Y.T.*, + , *T-IM Dec 00* 1344-1357

Audio equipment; cf. Microphones

Automatic guided vehicles
- AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A.*, + , *T-IM Aug 00* 813-819

Automatic optical inspection
- 3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G.*, + , *T-IM Jun 00* 628-636

Automatic test equipment
- AC-DC transfer calib., automated syst. *Filipski, P.S.*, + , *T-IM Apr 00* 279-284
- adaptive analog test and diagnosis syst. *Cota, E.F.*, + , *T-IM Apr 00* 223-227
- arbitrary waveform generators, periodic Σ-Δ modulated streams. *Dufort, B.*, + , *T-IM Feb 00* 188-199
- automatic test equipment for meas. of symmetrical and asymmetrical RE interference based on hybrid jns. *De Bonitatibus, A.*, + , *T-IM Dec 00* 1337-1343
- coin tap test, accelerometer and microphone data correl. *Huadong Wu*, + , *T-IM Jun 00* 493-497
- microwave online meas. of source/device refl. coeffs. *Madonna, G.*, + , *T-IM Apr 00* 285-289
- sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J.*, + , *T-IM Jun 00* 503-508

Automatic testing
- microwave online meas. of source/device refl. coeffs. *Madonna, G.*, + , *T-IM Apr 00* 285-289
- VLSI ccts. BIST, space compression. *Das, S.R.*, + , *T-IM Jun 00* 690-705

Automatic testing; cf. Automatic test pattern generation

Automatic test pattern generation
- mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K.*, + , *T-IM Jun 00* 671-678

Automation; cf. Materials handling

Automobiles
- sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J.*, + , *T-IM Jun 00* 503-508

Autoregressive moving average processes
- stationary stochastic proc., spectral anal., time series models. *Broersen, P.M.T.*, *T-IM Aug 00* 766-772

Autoregressive processes
- complex nonlinear exponential autoregressive model approach to shape recognition using neural networks. *Xiong, S.*, + , *T-IM Dec 00* 1298-1304

Autoregressive processes; cf. Autoregressive moving average processes

Avalanche diodes
- integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F.*, + , *T-IM Dec 00* 1167-1175

AWGN
- noisy digitizer, overall conversion error, noise model. *Bertocco, M.*, + , *T-IM Feb 00* 83-86

B

Backpropagation
- AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A.*, + , *T-IM Aug 00* 813-819
- core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D.*, + , *T-IM Feb 00* 154-160

Ball grid arrays
- IC package shielding effectiveness meas., integrated antenna use. *Roy, L.*, + , *T-IM Apr 00* 409-412

Bayes methods
- multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C.*, + , *T-IM Jun 00* 637-642
- NDT data fusion techs., pixel-level. *Gros, X.E.*, + , *T-IM Oct 00* 1083-1090

Belief networks
- instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G.*, + , *T-IM Feb 00* 100-107

Bessel functions
- small amplit. sinusoidal vibr. meas., Michelson interferometry. *Ivaschescu, V.*, *T-IM Jun 00* 643-647

Binary codes
- some aspects of pseudo random binary array-based surface charactn. *Spoelder, H.J.W.*, + , *T-IM Dec 00* 1331-1336

Biochemistry
- blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A.*, + , *T-IM Jun 00* 541-545

Biocontrol
- scoliosis treatment, low-power posture meas./control syst. *Lou, E.*, + , *T-IM Feb 00* 108-113

Bioelectric phenomena; cf. Bioelectric potentials

Bioelectric potentials
- biopotential meas., power line interf., model. *Chimene, M.F.*, + , *T-IM Jun 00* 535-540

Biological effects of fields
- lossy media isotropic meas., MM-resoln. E-field probe, 100 MHz-20 GHz. *Pokovic, K.*, + , *T-IM Aug 00* 873-878

Biological effects of radiation; cf. Biological effects of fields

Biological fluid dynamics; cf. Pneumodynamics

Biological organs; cf. Brain

Biological techniques
- multifactorial movement anal. in weightlessness. *Baroni, G.*, + , *T-IM Jun 00* 476-482

Biological tissues
lossy media isotropic meas., MM-resoln. E-field probe, 100 MHz-20 GHz. *Pokovic, K.*, +, *T-IM Aug 00* 873-878
MR power sens. for tissue meas. *Vountesmeri, V.*, +, *T-IM Jun 00* 513-516
Biological tissues; cf. Blood vessels; Skin
Biology; cf. Biochemistry; Cardiology; Ecology
Biology computing
multifactorial movement anal. in weightlessness. *Baroni, G.*, +, *T-IM Jun 00* 476-482
Biomechanics
hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A.*, +, *T-IM Apr 00* 388-391
multifactorial movement anal. in weightlessness. *Baroni, G.*, +, *T-IM Jun 00* 476-482
scoliosis treatment, low-power posture meas./control syst. *Lou, E.*, +, *T-IM Feb 00* 108-113
Biomedical electrodes
biopotential meas., power line interf., model. *Chimene, M.F.*, +, *T-IM Jun 00* 535-540
brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A.*, +, *T-IM Jun 00* 591-595
Biomedical equipment
scoliosis treatment, low-power posture meas./control syst. *Lou, E.*, +, *T-IM Feb 00* 108-113
Biomedical equipment; cf. Biomedical electrodes
Biomedical imaging
comments, with author's reply, on "Evanescent microwaves: A novel super-resolution noncontact nondestructive imaging. *Kumar, A.*, +, *T-IM Dec 00* 1358
Biomedical imaging; cf. Biomedical ultrasonics; Diagnostic radiography; Electric impedance imaging; Medical image processing
Biomedical measurement
biopotential meas., power line interf., model. *Chimene, M.F.*, +, *T-IM Jun 00* 535-540
blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A.*, +, *T-IM Jun 00* 541-545
hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A.*, +, *T-IM Apr 00* 388-391
MR power sens. for tissue meas. *Vountesmeri, V.*, +, *T-IM Jun 00* 513-516
scoliosis treatment, low-power posture meas./control syst. *Lou, E.*, +, *T-IM Feb 00* 108-113
spinal cord injury patients, air cushion press. meas. *Tanimoto, Y.*, +, *T-IM Jun 00* 666-670
Biomedical measurement; cf. Blood flow measurement; Blood pressure measurement
Biomedical ultrasonics
tumor therapeutic US heating, FEA simul. *Jarosz, B.J.*, *T-IM Apr 00* 260-264
Bio-optics
blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A.*, +, *T-IM Jun 00* 541-545
Biophysics; cf. Biomechanics; Bio-optics; Biothermics
Biothermics
brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A.*, +, *T-IM Jun 00* 591-595
tumor therapeutic US heating, FEA simul. *Jarosz, B.J.*, *T-IM Apr 00* 260-264
Biothermics; cf. Hyperthermia
Bipolar analog integrated circuits
resistive-mirror-based voltage-controlled resistor, bipolar technol. *Tadic, N.*, *T-IM Feb 00* 132-136
Bipolar integrated circuits; cf. Bipolar analog integrated circuits
Bipolar transistor circuits
LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P.*, *T-IM Feb 00* 2-4
Bipolar transistors
self-balancing lin. bridge ccts. with resistive minors for resistance meas. *Tadic, N.*, +, *T-IM Dec 00* 1318-1325
Biquadratic filters
voltage-mode universal config. *Jiun-Wei Horng*, *T-IM Oct 00* 1043-1045
Blood
toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A.*, +, *T-IM Jun 00* 541-545
Blood flow measurement
self-mixing laser speckle velocimeter for blood flow meas. *Ozdemir, S.K.*, +, *T-IM Oct 00* 1029-1035
Blood pressure measurement
ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S.*, +, *T-IM Oct 00* 998-1003
differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P.*, +, *T-IM Jun 00* 498-502
Blood vessels
tumor therapeutic US heating, FEA simul. *Jarosz, B.J.*, *T-IM Apr 00* 260-264
Boron alloys
FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H.*, +, *T-IM Jun 00* 648-652
Bragg gratings
comparison of wavelength dependent polarization dependent loss meas. in fiber gratings. *Zhu, Y.*, +, *T-IM Dec 00* 1231-1239
Brain
brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A.*, +, *T-IM Jun 00* 591-595
Bridge circuits
high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C.*, +, *T-IM Apr 00* 365-370
lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S.*, *T-IM Feb 00* 151-153
resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V.*, +, *T-IM Jun 00* 585-590
self-balancing lin. bridge ccts. with resistive minors for resistance meas. *Tadic, N.*, +, *T-IM Dec 00* 1318-1325
Bridge instruments
DC resist. scale at IEN, 100 kΩ to 1 TΩ. *Galliana, F.*, +, *T-IM Oct 00* 959-963
Built-in self test
mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K.*, +, *T-IM Jun 00* 671-678
VLSI ccts. BIST, space compression. *Das, S.R.*, +, *T-IM Jun 00* 690-705
Butterworth filters
multiple-stage OTA-C filters, testable design. *Cheng-Chung Hsu*, +, *T-IM Oct 00* 929-934

C

CAD; cf. Electronic design automation
Cadmium compounds
CdTe EO sens. for elec. and mag. fields. *Cecelja, F.*, +, *T-IM Jun 00* 483-487
CdZnTe based sensor for X-ray imaging appls. *Giakos, G.C.*, +, *T-IM Apr 00* 300-306
Calculus; cf. Differentiation
Calibration
3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G.*, +, *T-IM Jun 00* 628-636
AC-DC transfer calib., automated syst. *Filipski, P.S.*, +, *T-IM Apr 00* 279-284
AC voltage meas., LF, accurate methods comparison. *Kampik, M.*, +, *T-IM Apr 00* 429-433
ADC, error compensation. *Handel, P.*, +, *T-IM Oct 00* 1063-1068
arbitrary waveform generators, periodic Σ-Δ modulated streams. *Dufort, B.*, +, *T-IM Feb 00* 188-199
capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li*, +, *T-IM Jun 00* 531-534
conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D.*, +, *T-IM Oct 00* 1122-1127
DC resist. scale at IEN, 100 kΩ to 1 TΩ. *Galliana, F.*, +, *T-IM Oct 00* 959-963
directional antennas calib., errors. *Trzaska, H.*, *T-IM Oct 00* 1112-1116
elec. instrum. calib., nonsinusoidal conditions, test waveform selection. *Ferrero, A.*, +, *T-IM Apr 00* 382-387
EM flowmeter for open channels, dry calib. procedure. *Michalski, A.*, *T-IM Apr 00* 434-438
four terminal-pair capacitors, freq. charact. prediction, sensitivity. *Avramov-Zamurovic, S.*, +, *T-IM Apr 00* 398-404
geom. error compensation of precision motion systs. *Tan, K.K.*, +, *T-IM Oct 00* 984-991
high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C.*, +, *T-IM Apr 00* 365-370
low fiber opt. atten. meas. using double sq.-law detect. *Singh, R.*, +, *T-IM Feb 00* 30-31
meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen*, +, *T-IM Feb 00* 77-82
measuring distance between graduation lines on graduated scales using electrical test structure metrology. *Penzes, W.B.*, +, *T-IM Dec 00* 1285-1288
microspectrometer design, digital correction, rational filters. *Wisniewski, M.P.*, +, *T-IM Feb 00* 43-48
microwave online meas. of source/device refl. coeffs. *Madonna, G.*, +, *T-IM Apr 00* 285-289
multidimensional random pulses generation for radioactivity meas. *Kot-Nawrocki, E.P.*, +, *T-IM Aug 00* 754-761

- PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E., +, T-IM Feb 00* 94-99
- power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P., +, T-IM Aug 00* 790-794
- precision temp. calib. lab., automation, software reliab. *Bojkovski, J., +, T-IM Jun 00* 596-601
- spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., +, T-IM Apr 00* 449-454
- stability eval. of high-precision multifunction instruments for traceability transfer. *Cassiago, C., +, T-IM Dec 00* 1206-1210
- time-domain NWA, thru-reflect-line calib., error minim. *Ferrari, P., +, T-IM Feb 00* 178-187

Cancer
- tumor therapeutic US heating, FEA simul. *Jarosz, B.J., T-IM Apr 00* 260-264

Capacitance measurement
- brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A., +, T-IM Jun 00* 591-595
- four terminal-pair capacitance & dissipation factor charactn. *Koffman, A.D., +, T-IM Apr 00* 346-348
- four terminal-pair capacitors, freq. charact. prediction, sensitivity. *Avramov-Zamurovic, S., +, T-IM Apr 00* 398-404
- relax. oscillator limitations. *Yili Liu, +, T-IM Oct 00* 980-983
- toroidal cross-capacitor, transportable std. *Castelli, F., T-IM Aug 00* 721-726
- tunable vacuum-gap cryogenic coaxial capacitor. *Overney, F., +, T-IM Dec 00* 1326-1330

Capacitive sensors
- capacitive ang. posn. sens., virtual rotor grounding. *Brasseur, G., +, T-IM Oct 00* 1108-1111
- capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li, +, T-IM Jun 00* 531-534
- capacitive sens. nonlin., elec.-field bending influence. *Li, X., +, T-IM Apr 00* 256-259
- intell. press. sens. using neural networks. *Patra, J.C., +, T-IM Aug 00* 829-834
- surface dielec. const. meas., planar applicator. *Bozzi, E., +, T-IM Aug 00* 773-775

Capacitors
- four terminal-pair capacitance & dissipation factor charactn. *Koffman, A.D., +, T-IM Apr 00* 346-348
- four terminal-pair capacitors, freq. charact. prediction, sensitivity. *Avramov-Zamurovic, S., +, T-IM Apr 00* 398-404
- toroidal cross-capacitor, transportable std. *Castelli, F., T-IM Aug 00* 721-726
- tunable vacuum-gap cryogenic coaxial capacitor. *Overney, F., +, T-IM Dec 00* 1326-1330

Carbon compounds; cf. Organic compounds

Carbon fibers
- fiber with open cavity, cond. microwave meas. *Sagnard, F., +, T-IM Oct 00* 942-948

Cardiology
- ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S., +, T-IM Oct 00* 998-1003
- differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P., +, T-IM Jun 00* 498-502

Cardiovascular system; cf. Blood vessels

Cavity resonators
- broadband coaxial cavity resonator for complex permittivity meas. of liquids. *Raveendranath, U., +, T-IM Dec 00* 1305-1312
- moisture meas. using cylindrical resonating cavity. *Bourdel, E., +, T-IM Oct 00* 1023-1028

Cavity resonators; cf. Acoustic resonators

Cells (electric)
- antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A., +, T-IM Apr 00* 371-375

Ceramics
- Na potentiometric sens., static/dyn. selectivity. *Attari, M., +, T-IM Aug 00* 732-735
- surface dielec. const. meas., planar applicator. *Bozzi, E., +, T-IM Aug 00* 773-775

Cesium
- microwave freq. reference based on VCSEL-driven dark line resonances in Cs vapor. *Kitching, J., +, T-IM Dec 00* 1313-1317

Channel flow
- EM flowmeter for open channels, dry calib. procedure. *Michalski, A., T-IM Apr 00* 434-438

Chemical analysis; cf. Spectrochemical analysis

Chemical engineering computing
- gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S., +, T-IM Apr 00* 424-428

Chemical reactions; cf. Oxidation

Chemical sensors
- ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M., +, T-IM Feb 00* 114-119
- Na potentiometric sens., static/dyn. selectivity. *Attari, M., +, T-IM Aug 00* 732-735

Chemical sensors; cf. Gas sensors

Chemical technology; cf. Chemical variables measurement

Chemical variables measurement
- ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M., +, T-IM Feb 00* 114-119

Chemical variables measurement; cf. Moisture measurement

Chemistry; cf. Biochemistry

Chemistry computing; cf. Spectroscopy computing

Chirp modulation
- chirped-FM US range sens., local meas. validation. *Mauris, G., +, T-IM Aug 00* 835-839
- FMCW-like method. *Journet, B., +, T-IM Aug 00* 840-843

Circuit CAD
- multiple-stage OTA-C filters, testable design. *Cheng-Chung Hsu, +, T-IM Oct 00* 929-934

Circuit feedback
- current-to-voltage converter, amp.-aided two-stage CT. *Zinkernagel, J., T-IM Feb 00* 144-150
- microgravity isolation, implicit freq. weighting. *Hampton, R.D., +, T-IM Apr 00* 265-269
- power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P., +, T-IM Aug 00* 790-794
- smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062
- sync. detectors with improved dyn. reserve. *Martens, O., T-IM Oct 00* 1046-1049

Circuit feedback; cf. Feedback amplifiers

Circuit layout; cf. Integrated circuit layout

Circuit noise
- calib. of imperfect quantizers. *Handel, P., +, T-IM Oct 00* 1063-1068
- FRF meas., broadband vs. stepped sine methods. *Schoukens, J., +, T-IM Apr 00* 275-278
- lin. ccts., resistor-induced thermal noise, generalization. *Giannetti, R., T-IM Feb 00* 87-88

Circuit noise; cf. Integrated circuit noise

Circuit oscillations
- IC testing by oscill. test methodology. *Wong, M.W.-T., T-IM Apr 00* 240-245

Circuit reliability; cf. Integrated circuit reliability

Circuit testing
- adaptive analog test and diagnosis syst. *Cota, E.F., +, T-IM Apr 00* 223-227
- selection of test nodes for analog fault diagnosis in dictionary approach. *Prasad, V.C., +, T-IM Dec 00* 1289-1297

Circuit testing; cf. Integrated circuit testing

Circuit theory; cf. Network analysis; Network synthesis; Network topology

Circular waveguides
- moisture meas. using cylindrical resonating cavity. *Bourdel, E., +, T-IM Oct 00* 1023-1028

Civil engineering computing; cf. Structural engineering computing

Client-server systems
- Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young, +, T-IM Jun 00* 579-584
- Web-based distributed virtual educational lab. *Benetazzo, L., +, T-IM Apr 00* 349-356

Clocks
- fast computation of maximum time interval error by binary decomp. *Bregni, S., +, T-IM Dec 00* 1240-1244

Clocks; cf. Atomic clocks

Closed loop systems
- fiber-optic ESPI, automatic phase stepping. *Martini, G., +, T-IM Aug 00* 823-828
- LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., +, T-IM Jun 00* 546-549

Clutter; cf. Radar clutter

CMOS analog integrated circuits
- CMOS OTA, CMRR freq. response, integrated amp. design. *Giustolisi, G., +, T-IM Feb 00* 137-143

CMOS digital integrated circuits; cf. CMOS logic circuits

CMOS integrated circuits
- high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C., +, T-IM Apr 00* 365-370
- magneto-dosimeter, MCM based integrated 3D mag. microsyst. *Malcovati, P., +, T-IM Apr 00* 341-345

+ Check author entry for coauthors

CMOS integrated circuits; cf. CMOS analog integrated circuits

CMOS logic circuits
- interpolating time counter, single FPGA device, 100 ps resoln. *Szplet, R.*, + , *T-IM Aug 00* 879-883

Cobalt alloys
- FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H.*, + , *T-IM Jun 00* 648-652

Codes; cf. Binary codes

Coherence; cf. Light coherence

Coincidence techniques
- multidimensional random pulses generation for radioactivity meas. *Kot-Nawrocki, E.P.*, + , *T-IM Aug 00* 754-761

Color; cf. Color graphics

Color graphics
- 3D objs. automatic acquisition, portable modular syst. *Borghese, N.A.*, + , *T-IM Oct 00* 1128-1136

Combinatorial mathematics; cf. Graph theory

Comparators (circuits)
- capacitance meas., relax. oscillator limitations. *Yili Liu*, + , *T-IM Oct 00* 980-983
- lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S.*, *T-IM Feb 00* 151-153

Compensation
- fiber opt. differential interferometer, strain meas. *Libo Yuan*, + , *T-IM Aug 00* 779-782
- fiber opt. press. & temp. sens., HiBi fiber, coherence MUX. *Bock, W.J.*, +, *T-IM Apr 00* 392-397
- LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P.*, *T-IM Feb 00* 2-4
- logarithmic LED electrometer, low DC current meas. *Acharya, Y.B.*, + , *T-IM Feb 00* 5-9
- multi-axis force sens., dyn. decoupling and compensation. *Ke-Jun Xu*, + , *T-IM Oct 00* 935-941
- resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V.*, + , *T-IM Jun 00* 585-590

Compensation; cf. Error compensation

Composite materials
- fiber with open cavity, cond. microwave meas. *Sagnard, F.*, + , *T-IM Oct 00* 942-948
- NDT data fusion techs., pixel-level. *Gros, X.E.*, + , *T-IM Oct 00* 1083-1090

Composite materials; cf. Concrete

Compressive strength
- concrete, aggregate conc./compressive strength, microwave near-field refl. *Bois, K.J.*, + , *T-IM Feb 00* 49-55

Computational complexity
- microspectrometer design, digital correction, rational filters. *Wisniewski, M.P.*, + , *T-IM Feb 00* 43-48

Computer aided analysis; cf. Digital simulation

Computer aided instruction
- Web-based distributed virtual educational lab. *Benetazzo, L.*, + , *T-IM Apr 00* 349-356

Computer applications; cf. Computerized control; Computerized instrumentation; Medical computing

Computer architecture
- geographic network for rem. test expts. *Arpaia, P.*, + , *T-IM Oct 00* 992-997

Computer graphic equipment; cf. Image scanners

Computer graphics; cf. Antialiasing; Color graphics

Computer interfaces
- generic automated/semiautomated digital multi-electrode instrument for field resistivity meas. *Werkema, D.D.*, + , *T-IM Dec 00* 1249-1253

Computer interfaces; cf. Network interfaces; Peripheral interfaces

Computerized control
- precision temp. calib. lab., automation, software reliab. *Bojkovski, J.*, + , *T-IM Jun 00* 596-601

Computerized control; cf. Industrial control

Computerized instrumentation
- antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A.*, + , *T-IM Apr 00* 371-375
- capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li*, + , *T-IM Jun 00* 531-534
- chirped-FM US range sens., local meas. validation. *Mauris, G.*, + , *T-IM Aug 00* 835-839
- DC resist. scale at IEN, 100 kΩ to 1 TΩ. *Galliana, F.*, + , *T-IM Oct 00* 959-963
- distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K.*, +, *T-IM Aug 00* 746-753
- flue gas flow meas. using neural networks, sens. locations optim. *Kang, H.*, + , *T-IM Apr 00* 228-233
- gated single-particle counting syst., errors anal. *Zielinski, M.*, *T-IM Oct 00* 1069-1076
- generic automated/semiautomated digital multi-electrode instrument for field resistivity meas. *Werkema, D.D.*, + , *T-IM Dec 00* 1249-1253
- geographic network for rem. test expts. *Arpaia, P.*, + , *T-IM Oct 00* 992-997
- intell. press. sens. using neural networks. *Patra, J.C.*, + , *T-IM Aug 00* 829-834
- LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C.*, + , *T-IM Jun 00* 546-549
- multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G.*, + , *T-IM Aug 00* 884-889
- multifactorial movement anal. in weightlessness. *Baroni, G.*, + , *T-IM Jun 00* 476-482
- multifiber opt. sens. for temp. meas. *Betta, G.*, + , *T-IM Oct 00* 1004-1008
- PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E.*, + , *T-IM Feb 00* 94-99
- phase-sensitive vision for moving targets posn. meas. *Sandoz, P.*, + , *T-IM Aug 00* 867-872
- precision temp. calib. lab., automation, software reliab. *Bojkovski, J.*, + , *T-IM Jun 00* 596-601
- sinewave generator synchronized design for AC metrology. *Callegaro, L.*, + , *T-IM Apr 00* 320-324
- skin nevoid lesions diagnosis, 3D meas. syst. *Castellini, P.*, + , *T-IM Oct 00* 924-928

Computerized instrumentation; cf. Automatic test equipment; Computerized monitoring; Computerized tomography; High energy physics instrumentation computing; Spectroscopy computing; Virtual instrumentation

Computerized monitoring
- cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin*, + , *T-IM Feb 00* 120-128
- dust monitor using integrat. sphere, real-time meas. *Watanabe, K.*, + , *T-IM Jun 00* 679-684
- Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young*, + , *T-IM Jun 00* 579-584
- scoliosis treatment, low-power posture meas./control syst. *Lou, E.*, + , *T-IM Feb 00* 108-113
- sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J.*, + , *T-IM Jun 00* 503-508
- smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B.*, + , *T-IM Jun 00* 621-627

Computerized navigation
- chirped-FM US range sens., local meas. validation. *Mauris, G.*, + , *T-IM Aug 00* 835-839

Computerized tomography
- microwave imaging, inverse scatt., GA based image reconstr. *Pastorino, M.*, + , *T-IM Jun 00* 573-578

Computer networks; cf. Intranets

Computer vision
- PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E.*, + , *T-IM Feb 00* 94-99
- phase-sensitive vision for moving targets posn. meas. *Sandoz, P.*, + , *T-IM Aug 00* 867-872

Computer vision; cf. Active vision; Robot vision

Concrete
- concrete, aggregate conc./compressive strength, microwave near-field refl. *Bois, K.J.*, + , *T-IM Feb 00* 49-55

Condition monitoring
- integrated bearing condition monitoring, virtual instrum. syst. *Wang, C.*, + , *T-IM Apr 00* 325-332
- rly. track profile meas., composite real-time image proc. *Alippi, C.*, + , *T-IM Jun 00* 559-564
- smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B.*, + , *T-IM Jun 00* 621-627

Confined flow
- flue gas flow meas. using neural networks, sens. locations optim. *Kang, H.*, + , *T-IM Apr 00* 228-233

Confined flow; cf. Channel flow

Conformal antennas
- wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K.*, + , *T-IM Apr 00* 439-448

Constant current sources
- LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P.*, *T-IM Feb 00* 2-4

Constants
- kg unit of mass using supercond. MAGLEV. *Shiota, F.*, + , *T-IM Oct 00* 1117-1121

Continuous time systems
- microgravity isolation, implicit freq. weighting. *Hampton, R.D.*, + , *T-IM Apr 00* 265-269

Continuum mechanics; cf. Mechanical contact

Control equipment; cf. Microcontrollers; Thermostats

Controller area networks
- smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B.*, + , *T-IM Jun 00* 621-627

Control nonlinearities

polynomial models selection with accurate derivative. *Broersen, P.M.T., T-IM Oct 00* 910-914

Control system analysis

lin., polynomial models with accurate derivative. *Broersen, P.M.T., T-IM Oct 00* 910-914

Control systems; cf. Closed loop systems; Nonlinear control systems; Observers

Control theory; cf. Compensation; Control nonlinearities; Control system analysis; Observability; Optimal control; Robust control; Two-term control

Convergence

intelligent strategy for improving meas. precision of FOG. *Handel, P., T-IM Dec 00* 1189-1193

Converters

current-to-voltage converter, amp.-aided two-stage CT. *Zinkernagel, J., T-IM Feb 00* 144-150

Converters; cf. Driver circuits; Inverters

Convolution

rly. track profile meas., composite real-time image proc. *Alippi, C., + , T-IM Jun 00* 559-564

Cooling

sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J., + , T-IM Jun 00* 503-508

Cores; cf. Magnetic cores

Correlation methods

correl. spectrum analyzer, high sensitivity noise meas. *Sampietro, N., + , T-IM Aug 00* 820-822

hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A., + , T-IM Apr 00* 388-391

meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen, + , T-IM Feb 00* 77-82

time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S., + , T-IM Apr 00* 357-364

Corrosion protective coatings

antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A., + , T-IM Apr 00* 371-375

Corrosion testing

antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A., + , T-IM Apr 00* 371-375

cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, + , T-IM Feb 00* 120-128

Counting circuits

gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076

Covariance matrices

distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K., + , T-IM Aug 00* 746-753

flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., + , T-IM Jun 00* 565-572

Crack detection

fluxset probe based meas. syst. for NDT, crack shape/posn. reconstr. *Bernieri, A., + , T-IM Apr 00* 455-459

Cracks; cf. Crack detection

Crosstalk; cf. Optical crosstalk

Cryogenics

tunable vacuum-gap cryogenic coaxial capacitor. *Overney, F., + , T-IM Dec 00* 1326-1330

Cryogenics; cf. Low-temperature techniques

Current measurement

measuring slowly changing AC sigs. without sample-and-hold cct. *Petrovic, P., + , T-IM Dec 00* 1245-1248

Current mirrors

CMOS OTA, CMRR freq. response, integrated amp. design. *Giustolisi, G., + , T-IM Feb 00* 137-143

Current-mode circuits

resistive-mirror-based voltage-controlled resistor, bipolar technol. *Tadic, N., T-IM Feb 00* 132-136

Current transformers

current-to-voltage converter, amp.-aided two-stage CT. *Zinkernagel, J., T-IM Feb 00* 144-150

electronic error reduction syst. for clamp-on probes and measuring current transformers. *Slomovitz, D., T-IM Dec 00* 1278-1281

Curve fitting

calib.-free temp. meas., p-n jn. i-u charact. model. *Kanoun, O., T-IM Aug 00* 901-904

multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C., + , T-IM Jun 00* 637-642

nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., + , T-IM Jun 00* 653-658

opt. shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C., T-IM Aug 00* 795-801

CW radar

FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L., + , T-IM Aug 00* 710-715

laser range finder, FMCW-like method. *Journet, B., + , T-IM Aug 00* 840-843

CW radar; cf. FM radar

D

Data acquisition

cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, + , T-IM Feb 00* 120-128

flue gas flow meas. using neural networks, sens. locations optim. *Kang, H., + , T-IM Apr 00* 228-233

generic automated/semiautomated digital multi-electrode instrument for field resistivity meas. *Werkema, D.D., + , T-IM Dec 00* 1249-1253

integrated bearing condition monitoring, virtual instrum. syst. *Wang, C., + , T-IM Apr 00* 325-332

Na potentiometric sens., static/dyn. selectivity. *Attari, M., + , T-IM Aug 00* 732-735

scoliosis treatment, low-power posture meas./control syst. *Lou, E., + , T-IM Feb 00* 108-113

Data analysis

ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S., + , T-IM Oct 00* 998-1003

differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P., + , T-IM Jun 00* 498-502

Data communication

RF MSK data commun. devices testing. *Bucci, G., + , T-IM Oct 00* 1009-1017

Data communication; cf. Integrated voice/data communication; Radio data systems; Telemetry

Data compression

cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, + , T-IM Feb 00* 120-128

mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K., + , T-IM Jun 00* 671-678

VLSI ccts. BIST, space compression. *Das, S.R., + , T-IM Jun 00* 690-705

Data conversion; cf. Analog-digital conversion; Digital-analog conversion

Data handling; cf. Data analysis

Data loggers

cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, + , T-IM Feb 00* 120-128

Deconvolution

blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A., + , T-IM Jun 00* 541-545

hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., + , T-IM Aug 00* 852-856

knock acoustic sig. estim. using parametric inversion. *Boubal, O., + , T-IM Aug 00* 890-895

multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C., + , T-IM Jun 00* 637-642

spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., + , T-IM Apr 00* 449-454

Delay circuits; cf. Delay lines

Delay estimation

FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L., + , T-IM Aug 00* 710-715

laser range finder, FMCW-like method. *Journet, B., + , T-IM Aug 00* 840-843

Delay lines

interpolating time counter, single FPGA device, 100 ps resoln. *Szplet, R., + , T-IM Aug 00* 879-883

Delay lines; cf. Optical delay lines

Delays; cf. Delay estimation

Delta modulation; cf. Sigma-delta modulation

Demodulation

fiber opt. press. & temp. sens., HiBi fiber, coherence MUX. *Bock, W.J., + , T-IM Apr 00* 392-397

GSM equipt. testing, time-freq. representations. *Angrisani, L., + , T-IM Oct 00* 1050-1056

intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J., + , T-IM Apr 00* 405-408

Design engineering; cf. Design for testability; Reverse engineering

Design for testability

multiple-stage OTA-C filters, testable design. *Cheng-Chung Hsu, + , T-IM Oct 00* 929-934

Detector circuits; cf. Peak detectors; Phase detectors

Deterministic algorithms

mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K., + , T-IM Jun 00* 671-678

+ Check author entry for coauthors

- nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., + , T-IM Jun 00* 653-658
- **Diagnostic expert systems**
  - instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G., + , T-IM Feb 00* 100-107
- **Diagnostic radiography**
  - CdZnTe based sensor for X-ray imaging appls. *Giakos, G.C., + , T-IM Apr 00* 300-306
- **Dielectric bodies**
  - microwave imaging, inverse scatt., GA based image reconstr. *Pastorino, M., + , T-IM Jun 00* 573-578
- **Dielectric devices; cf.** Capacitors
- **Dielectric liquids**
  - broadband coaxial cavity resonator for complex permittivity meas. of liquids. *Raveendranath, U., + , T-IM Dec 00* 1305-1312
  - ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M., + , T-IM Feb 00* 114-119
- **Dielectric materials; cf.** Dielectric liquids
- **Dielectric measurement**
  - generic automated/semiautomated digital multi-electrode instrument for field resistivity meas. *Werkema, D.D., + , T-IM Dec 00* 1249-1253
  - soil moisture meas. as fn. of depth. *Holdem, J.R., + , T-IM Oct 00* 964-970
- **Dielectric measurement; cf.** Permittivity measurement
- **Dielectric properties; cf.** Permittivity
- **Differential amplifiers**
  - biopotential meas., power line interf., model. *Chimene, M.F., + , T-IM Jun 00* 535-540
- **Differential amplifiers; cf.** Instrumentation amplifiers
- **Differential detection**
  - fiber opt. differential interferometer, strain meas. *Libo Yuan, + , T-IM Aug 00* 779-782
  - photoelastic fiber opt. press. sens., improved long-term stabil. *Changsen Sun, + , T-IM Aug 00* 776-778
- **Differentiating circuits**
  - reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808
- **Differentiation**
  - opt. shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C., T-IM Aug 00* 795-801
- **Diffraction gratings; cf.** Bragg gratings
- **Diffusion; cf.** Electromigration
- **Digital-analog conversion**
  - quadrature phase shifter, freq. insensitive, reactive power meas. *Djokic, B., + , T-IM Feb 00* 161-165
- **Digital circuits; cf.** Digital filters; Digital phase locked loops; Direct digital synthesis
- **Digital communication**
  - data traffic meas., speech/voice-band data class. *Benetazzo, L., + , T-IM Apr 00* 413-417
  - fast computation of maximum time interval error by binary decomp. *Bregni, S., + , T-IM Dec 00* 1240-1244
- **Digital filters**
  - microspectrometer design, digital correction, rational filters. *Wisniewski, M.P., + , T-IM Feb 00* 43-48
  - multidimensional random pulses generation for radioactivity meas. *Kot-Nawrocki, E.P., + , T-IM Aug 00* 754-761
  - reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808
- **Digital filters; cf.** Recursive filters
- **Digital instrumentation**
  - gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076
  - generic automated/semiautomated digital multi-electrode instrument for field resistivity meas. *Werkema, D.D., + , T-IM Dec 00* 1249-1253
  - harmonic losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L., + , T-IM Apr 00* 315-319
  - instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A., + , T-IM Aug 00* 783-789
  - PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E., + , T-IM Feb 00* 94-99
- **Digital instrumentation; cf.** Digital multimeters; Digital storage oscilloscopes; Digital voltmeters
- **Digital multimeters**
  - DC resist. scale at IEN, 100 kΩ to 1 TΩ. *Galliana, F., + , T-IM Oct 00* 959-963
  - stability eval. of high-precision multifunction instruments for traceability transfer. *Cassiago, C., + , T-IM Dec 00* 1206-1210
- **Digital phase locked loops**
  - sinewave generator synchronized design for AC metrology. *Callegaro, L., + , T-IM Apr 00* 320-324
- **Digital readout**
  - intell. press. sens. using neural networks. *Patra, J.C., + , T-IM Aug 00* 829-834
  - resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., + , T-IM Jun 00* 585-590
- **Digital signal processing chips**
  - algorithmic specification of specialized processor for spectrometric appls. *Ben Slima, M., + , T-IM Dec 00* 1224-1230
  - antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A., + , T-IM Apr 00* 371-375
  - cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, + , T-IM Feb 00* 120-128
  - error anal. of opt. current transducer operating with digital signal proc. syst. *Niewczas, P., + , T-IM Dec 00* 1254-1259
  - instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A., + , T-IM Aug 00* 783-789
  - multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G., + , T-IM Aug 00* 884-889
  - sens. sig. params. estim., DSP approach. *Bertocco, M., + , T-IM Jun 00* 685-689
- **Digital simulation**
  - IR image registration and reconstruction, multiple video frames. *Alam, M.S., + , T-IM Oct 00* 915-923
  - RF MSK data commun. devices testing. *Bucci, G., + , T-IM Oct 00* 1009-1017
- **Digital storage oscilloscopes**
  - appl. of phase meas. algm. to digitizing oscilloscope charactn. *Gori, S., + , T-IM Dec 00* 1211-1215
- **Digital systems; cf.** Digital communication; Multiprocessing systems; Real-time systems
- **Digital voltmeters**
  - AC voltage meas., LF, accurate methods comparison. *Kampik, M., + , T-IM Apr 00* 429-433
- **Direct digital synthesis**
  - AC voltage meas., LF, accurate methods comparison. *Kampik, M., + , T-IM Apr 00* 429-433
  - sinewave generator synchronized design for AC metrology. *Callegaro, L., + , T-IM Apr 00* 320-324
- **Directed graphs; cf.** Belief networks
- **Direct energy conversion; cf.** Cells (electric)
- **Direction-of-arrival estimation**
  - time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S., + , T-IM Apr 00* 357-364
- **Directive antennas**
  - calib. of directional antennas, limitations. *Trzaska, H., T-IM Oct 00* 1112-1116
- **Directive antennas; cf.** Horn antennas; Log periodic antennas
- **Discrete Fourier transforms**
  - lin. interpolation method. *Borkowski, J., T-IM Aug 00* 741-745
  - multifreq. sig. param., freq.-domain-based least sq. estim. *Carbone, P., + , T-IM Jun 00* 555-558
- **Discrete systems; cf.** Discrete time systems
- **Discrete time filters; cf.** Sampled data filters
- **Discrete time systems**
  - dithered quantizers, stochastic & deterministic, perform. *Carbone, P., + , T-IM Apr 00* 337-340
  - FRF meas., broadband vs. stepped sine methods. *Schoukens, J., + , T-IM Apr 00* 275-278
- **Discrete transforms; cf.** Discrete Fourier transforms
- **Diseases; cf.** Cancer
- **Disperse systems; cf.** Smoke
- **Displacement measurement**
  - phase-sensitive vision for moving targets posn. meas. *Sandoz, P., + , T-IM Aug 00* 867-872
- **Display instrumentation; cf.** Oscilloscopes
- **Distance learning**
  - Web-based distributed virtual educational lab. *Benetazzo, L., + , T-IM Apr 00* 349-356
- **Distance measurement**
  - chirped-FM US range sens., local meas. validation. *Mauris, G., + , T-IM Aug 00* 835-839
  - measuring distance between graduation lines on graduated scales using electrical test structure metrology. *Penzes, W.B., + , T-IM Dec 00* 1285-1288
- **Distance measurement; cf.** Laser ranging
- **Distributed control**
  - smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B., + , T-IM Jun 00* 621-627
- **Distributed processing; cf.** Client-server systems; Multiprocessing systems; Processor scheduling
- **Dividing circuits**
  - arbitrary power law device based on integrators. *Kiranon, R., + , T-IM Dec 00* 1176-1182

+ Check author entry for coauthors

resistive-mirror-based voltage-controlled resistor, bipolar technol. *Tadic, N., T-IM Feb 00* 132-136

Dividing circuits; cf. Voltage dividers

Doppler measurement; cf. Laser Doppler anemometry

Dosimetry

lossy media isotropic meas., MM-resoln. E-field probe, 100 MHz-20 GHz. *Pokovic, K., +, T-IM Aug 00* 873-878

Driver circuits

integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F., +, T-IM Dec 00* 1167-1175

LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P., T-IM Feb 00* 2-4

Dust

dust monitor using integrat. sphere, real-time meas. *Watanabe, K., +, T-IM Jun 00* 679-684

Dynamic response

multi-axis force sens., dyn. decoupling and compensation. *Ke-Jun Xu, +, T-IM Oct 00* 935-941

Dynamic response; cf. Transient response

Dynamics; cf. Friction

E

Echo

multilayer struct. thickness meas. using echo detect./wavelet transform. *Angrisani, L., +, T-IM Aug 00* 727-731

Ecology

hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., +, T-IM Aug 00* 852-856

Eddy current testing

cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, +, T-IM Feb 00* 120-128

fluxset probe based meas. syst. for NDT, crack shape/posn. reconstr. *Bernieri, A., +, T-IM Apr 00* 455-459

nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., +, T-IM Jun 00* 653-658

Edge detection

image-based meas., uncertainty charactn. *De Santo, M., +, T-IM Oct 00* 1101-1107

Education; cf. Distance learning; Engineering education

Educational computing; cf. Computer aided instruction

Elasticity; cf. Photoelasticity

Elastic waves; cf. Rayleigh waves

Elastomers; cf. Rubber

Electric admittance

capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li, +, T-IM Jun 00* 531-534

Electrical conductivity measurement

2D objs. microwave imaging, FEA appl. *Rekanos, I.T., +, T-IM Apr 00* 234-239

fiber with open cavity, cond. microwave meas. *Sagnard, F., +, T-IM Oct 00* 942-948

Electrical engineering; cf. Electrical engineering computing

Electrical engineering computing

core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D., +, T-IM Feb 00* 154-160

Electrical engineering computing; cf. Power engineering computing

Electrical faults; cf. Electric distortion; Fault location

Electrical resistivity

generic automated/semiautomated digital multi-electrode instrument for field resistivity meas. *Werkema, D.D., +, T-IM Dec 00* 1249-1253

Electric control equipment; cf. Electric sensing devices

Electric current measurement

AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P., +, T-IM Feb 00* 166-171

current-to-voltage converter, amp.-aided two-stage CT. *Zinkernagel, J., T-IM Feb 00* 144-150

EM transducers in thermonuclear fusion expt. RFX. *Fiorentin, P., +, T-IM Apr 00* 290-293

error anal. of opt. current transducer operating with digital signal proc. syst. *Niewczas, P., +, T-IM Dec 00* 1254-1259

Faraday effect elec. current sens. design, improved sensitivity. *Yi, B., +, T-IM Apr 00* 418-423

logarithmic LED electrometer, low DC current meas. *Acharya, Y.B., +, T-IM Feb 00* 5-9

magneto-opt. current sens., domain wall motion in orthoferrites. *Didosyan, Y.S., +, T-IM Feb 00* 14-18

Electric distortion

adaptive window fn. method for power meas. *Zhang, J.Q., +, T-IM Dec 00* 1194-1200

Electric distortion; cf. Nonlinear distortion

Electric field effects; cf. Electromigration

Electric field measurement

CdTe EO sens. for elec. and mag. fields. *Cecelja, F., +, T-IM Jun 00* 483-487

lossy media isotropic meas., MM-resoln. E-field probe, 100 MHz-20 GHz. *Pokovic, K., +, T-IM Aug 00* 873-878

offset parab. reflector antennas for free space material meas. *Matlacz, J., +, T-IM Aug 00* 862-866

Electric fields

capacitive sens. nonlin., elec.-field bending influence. *Li, X., +, T-IM Apr 00* 256-259

Electric furnaces; cf. Resistance furnaces

Electric heating; cf. Radiofrequency heating; Resistance heating

Electric immittance; cf. Electric admittance

Electric immittance measurement; cf. Electric impedance measurement

Electric impedance; cf. Electric resistance

Electric impedance imaging

brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A., +, T-IM Jun 00* 591-595

freq. anal. of elec. impedance tomography syst. *Szczepanik, Z., +, T-IM Aug 00* 844-851

Electric impedance measurement

antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A., +, T-IM Apr 00* 371-375

four terminal-pair capacitance & dissipation factor charactn. *Koffman, A.D., +, T-IM Apr 00* 346-348

four terminal-pair capacitors, freq. charact. prediction, sensitivity. *Avramov-Zamurovic, S., +, T-IM Apr 00* 398-404

traction rails at 50 Hz, internal impedance mes. *Mariscotti, A., +, T-IM Apr 00* 294-299

Electric impedance measurement; cf. Electric resistance measurement

Electric noise measurement

accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F., +, T-IM Aug 00* 716-720

correl. spectrum analyzer, high sensitivity noise meas. *Sampietro, N., +, T-IM Aug 00* 820-822

LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., +, T-IM Jun 00* 546-549

meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen, +, T-IM Feb 00* 77-82

Electric potential

charactn. of material vs. temp. using P(VDF-TrFE) SAW transducers. *Benech, P., +, T-IM Dec 00* 1264-1266

Electric resistance

why nanovoltmeter offset currents do not explain measured deviations in quantized Hall resistance. *Inglis, D., +, T-IM Dec 00* 1358-1359

Electric resistance measurement

coaxial resistors for precision meas., QHR transfer stds. *Elmquist, R.E., T-IM Apr 00* 210-215

DC resist. scale at IEN, 100 kΩ to 1 TΩ. *Galliana, F., +, T-IM Oct 00* 959-963

lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S., T-IM Feb 00* 151-153

self-balancing lin. bridge ccts. with resistive minors for resistance meas. *Tadic, N., +, T-IM Dec 00* 1318-1325

Electric sensing devices

CdZnTe based sensor for X-ray imaging appls. *Giakos, G.C., +, T-IM Apr 00* 300-306

microstrip patch sens. for permittivity meas. *Bogosanovich, M., T-IM Oct 00* 1144-1148

moisture meas. using cylindrical resonating cavity. *Bourdel, E., +, T-IM Oct 00* 1023-1028

resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., +, T-IM Jun 00* 585-590

Electric sensing devices; cf. Capacitive sensors

Electric variables control; cf. Voltage control

Electric variables measurement

stability eval. of high-precision multifunction instruments for traceability transfer. *Cassiago, C., +, T-IM Dec 00* 1206-1210

Electric variables measurement; cf. Attenuation measurement; Capacitance measurement; Dielectric measurement; Electrical conductivity measurement; Electric current measurement; Electric field measurement; Electric noise measurement; Energy measurement; Frequency measurement; Gain measurement; Phase measurement; Power measurement; Voltage measurement

Electrochemical devices; cf. Cells (electric)

Electrochemistry

antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A., +, T-IM Apr 00* 371-375

Electrodes
capacitive sens. nonlin., elec.-field bending influence. *Li, X., + , T-IM Apr 00* 256-259
Electrodes; cf. Biomedical electrodes
Electromagnetic compatibility
CdTe EO sens. for elec. and mag. fields. *Cecelja, F., + , T-IM Jun 00* 483-487
IC package shielding effectiveness meas., integrated antenna use. *Roy, L., + , T-IM Apr 00* 409-412
quality mgt. problems for elec. as processed material. *Sasdelli, R., + , T-IM Apr 00* 460-467
Electromagnetic devices
EM flowmeter for open channels, dry calib. procedure. *Michalski, A., T-IM Apr 00* 434-438
EM transducers in thermonuclear fusion expt. RFX. *Fiorentin, P., + , T-IM Apr 00* 290-293
Electromagnetic fields
directional antennas calib., errors. *Trzaska, H., T-IM Oct 00* 1112-1116
Electromagnetic interference
biopotential meas., power line interf., model. *Chimene, M.F., + , T-IM Jun 00* 535-540
Electromagnetic interference; cf. Radiofrequency interference
Electromagnetic pulse
lightning emitted sources, broadband radio interferometry. *Mardiana, R., + , T-IM Apr 00* 376-381
Electromagnetic shielding
IC package shielding effectiveness meas., integrated antenna use. *Roy, L., + , T-IM Apr 00* 409-412
Electromagnetic wave interferometers; cf. Light interferometers; Radiowave interferometers
Electromagnetic wave interferometry; cf. Light interferometry; Radiowave interferometry
Electromagnetic wave polarization
wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K., + , T-IM Apr 00* 439-448
Electromagnetic wave polarization; cf. Light polarization
Electromagnetic wave propagation; cf. Radiowave propagation
Electromagnetic wave scattering
2D objs. microwave imaging, FEA appl. *Rekanos, I.T., + , T-IM Apr 00* 234-239
microwave imaging, inverse scatt., GA based image reconstr. *Pastorino, M., + , T-IM Jun 00* 573-578
Electromagnetic wave scattering; cf. Light scattering
Electromagnetic wave transmission
microwave dielec. props. meas., phase-shift ambiguity problem. *Trabelsi, S., + , T-IM Feb 00* 56-60
Electromagnets; cf. Superconducting magnets
Electrometers
AC-DC electrometic transfer std., thermal converter comparison. *Pogliano, U., + , T-IM Aug 00* 896-900
logarithmic LED electrometer, low DC current meas. *Acharya, Y.B., + , T-IM Feb 00* 5-9
Electromigration
accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F., + , T-IM Aug 00* 716-720
LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., + , T-IM Jun 00* 546-549
Electronic design automation
multi-axis force sens., dyn. decoupling and compensation. *Ke-Jun Xu, + , T-IM Oct 00* 935-941
Electronic design automation; cf. Circuit CAD
Electronic engineering; cf. High-temperature electronics
Electronic engineering computing; cf. Electronic design automation; SPICE
Electronic equipment testing
intelligent strategy for improving meas. precision of FOG. *Handel, P., T-IM Dec 00* 1189-1193
Electronic equipment testing; cf. Circuit testing; Telecommunication equipment testing
Electronic speckle pattern interferometry
fiber-optic ESPI, automatic phase stepping. *Martini, G., + , T-IM Aug 00* 823-828
Electro-optical devices
CdTe EO sens. for elec. and mag. fields. *Cecelja, F., + , T-IM Jun 00* 483-487
Electro-optical devices; cf. Electro-optical modulation
Electro-optical effects; cf. Pockels effect
Electro-optical modulation
automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C., + , T-IM Feb 00* 32-36
fiber-optic ESPI, automatic phase stepping. *Martini, G., + , T-IM Aug 00* 823-828
Electrostatic devices; cf. Capacitors
Electrostatic discharge; cf. Lightning
Electrostatics; cf. Electric fields
Embedded systems
mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K., + , T-IM Jun 00* 671-678
Emission; cf. Luminescence
Encoding
mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K., + , T-IM Jun 00* 671-678
Energy measurement
stochastic watthour meter, high-precision, accuracy limit. *Pejic, D., + , T-IM Jun 00* 617-620
Engineering; cf. Engineering education; Maintenance engineering
Engineering computing; cf. Chemical engineering computing; Electrical engineering computing; Telecommunication computing
Engineering education
Web-based distributed virtual educational lab. *Benetazzo, L., + , T-IM Apr 00* 349-356
Engines; cf. Internal combustion engines
Equivalent circuits
biopotential meas., power line interf., model. *Chimene, M.F., + , T-IM Jun 00* 535-540
freq. anal. of elec. impedance tomography syst. *Szczepanik, Z., + , T-IM Aug 00* 844-851
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., + , T-IM Feb 00* 172-177
LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., + , T-IM Jun 00* 546-549
meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen, + , T-IM Feb 00* 77-82
Erbium
Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I., + , T-IM Aug 00* 762-765
Error analysis
error anal. of opt. current transducer operating with digital signal proc. syst. *Niewczas, P., + , T-IM Dec 00* 1254-1259
error measures for resampled irregular data. *de Waele, S., + , T-IM Apr 00* 216-222
gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076
intelligent strategy for improving meas. precision of FOG. *Zhu, R., + , T-IM Dec 00* 1183-1188
nonlin. averaging, PSD estim. algms. *Attivissimo, F., + , T-IM Oct 00* 1036-1042
Error compensation
calib. of imperfect quantizers. *Handel, P., + , T-IM Oct 00* 1063-1068
conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D., + , T-IM Oct 00* 1122-1127
current-to-voltage converter, amp.-aided two-stage CT. *Zinkernagel, J., T-IM Feb 00* 144-150
electronic error reduction syst. for clamp-on probes and measuring current transformers. *Slomovitz, D., T-IM Dec 00* 1278-1281
geom. error compensation of precision motion systs. *Tan, K.K., + , T-IM Oct 00* 984-991
sinewave generator synchronized design for AC metrology. *Callegaro, L., + , T-IM Apr 00* 320-324
spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., + , T-IM Apr 00* 449-454
Error correction
calib. of imperfect quantizers. *Handel, P., + , T-IM Oct 00* 1063-1068
time-domain NWA, thru-reflect-line calib., error minim. *Ferrari, P., + , T-IM Feb 00* 178-187
Errors
visual meas. of orientation error for mobile robot. *Lang, S.Y.T., + , T-IM Dec 00* 1344-1357
Errors; cf. Measurement errors; Roundoff errors
Error statistics
nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., + , T-IM Jun 00* 653-658
VLSI ccts. BIST, space compression. *Das, S.R., + , T-IM Jun 00* 690-705
Estimation theory; cf. Amplitude estimation; Frequency estimation; Maximum likelihood estimation; Nonlinear estimation; Phase estimation
Europium
YVO$_4$:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P., + , T-IM Feb 00* 129-131

+ Check author entry for coauthors

Evolutionary computation; cf. Genetic algorithms
Expert systems; cf. Diagnostic expert systems

F

Facsimile
in-service meas. syst. for quality anal. of facsimile transmissions. *Bertocco, M.*, + , *T-IM Dec 00* 1267-1271
Factory automation; cf. Industrial control
Faraday effect
CdTe EO sens. for elec. and mag. fields. *Cecelja, F.*, + , *T-IM Jun 00* 483-487
current sens., domain wall motion in orthoferrites. *Didosyan, Y.S.*, + , *T-IM Feb 00* 14-18
error anal. of opt. current transducer operating with digital signal proc. syst. *Niewczas, P.*, + , *T-IM Dec 00* 1254-1259
Faraday effect elec. current sens. design, improved sensitivity. *Yi, B.*, + , *T-IM Apr 00* 418-423
Farming; cf. Agriculture
Fast Fourier transforms
accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F.*, + , *T-IM Aug 00* 716-720
instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A.*, + , *T-IM Aug 00* 783-789
meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen*, + , *T-IM Feb 00* 77-82
nonlin. averaging, PSD estim. algms. *Attivissimo, F.*, + , *T-IM Oct 00* 1036-1042
Fast fourier transforms; cf. Discrete Fourier transforms
Fault diagnosis
adaptive analog test and diagnosis syst. *Cota, E.F.*, + , *T-IM Apr 00* 223-227
in-service meas. syst. for quality anal. of facsimile transmissions. *Bertocco, M.*, + , *T-IM Dec 00* 1267-1271
instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G.*, + , *T-IM Feb 00* 100-107
integrated bearing condition monitoring, virtual instrum. syst. *Wang, C.*, + , *T-IM Apr 00* 325-332
intell. press. sens. using neural networks. *Patra, J.C.*, + , *T-IM Aug 00* 829-834
multiple-stage OTA-C filters, testable design. *Cheng-Chung Hsu*, + , *T-IM Oct 00* 929-934
selection of test nodes for analog fault diagnosis in dictionary approach. *Prasad, V.C.*, + , *T-IM Dec 00* 1289-1297
sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J.*, + , *T-IM Jun 00* 503-508
Fault diagnosis; cf. Fault location; Fault simulation
Fault location
accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F.*, + , *T-IM Aug 00* 716-720
IC testing by oscill. test methodology. *Wong, M.W.-T.*, *T-IM Apr 00* 240-245
Fault simulation
VLSI ccts. BIST, space compression. *Das, S.R.*, + , *T-IM Jun 00* 690-705
Fault tolerance
instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G.*, + , *T-IM Feb 00* 100-107
Feature extraction
complex nonlinear exponential autoregressive model approach to shape recognition using neural networks. *Xiong, S.*, + , *T-IM Dec 00* 1298-1304
gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S.*, + , *T-IM Apr 00* 424-428
Lamb-wave US NDE sig. anal., wavelet-transform-based method. *Legendre, S.*, + , *T-IM Jun 00* 524-530
methacholine detect., time series models of lung sounds. *Broersen, P.M.T.*, + , *T-IM Jun 00* 517-523
sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J.*, + , *T-IM Jun 00* 503-508
skin nevoid lesions diagnosis, 3D meas. syst. *Caslellini, P.*, + , *T-IM Oct 00* 924-928
visual meas. of orientation error for mobile robot. *Lang, S.Y.T.*, + , *T-IM Dec 00* 1344-1357
Feedback
scoliosis treatment, low-power posture meas./control syst. *Lou, E.*, + , *T-IM Feb 00* 108-113
Feedback; cf. Circuit feedback; Force feedback; State feedback
Feedback amplifiers
biquadratic filter design, voltage-mode universal config. *Jiun-Wei Horng*, *T-IM Oct 00* 1043-1045
current mode instrumentation amplifier (CMIA) topology. *Azhari, S.J.*, + , *T-IM Dec 00* 1272-1277
high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C.*, + , *T-IM Apr 00* 365-370
LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P.*, *T-IM Feb 00* 2-4
Feedforward
power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P.*, + , *T-IM Aug 00* 790-794
Feedforward; cf. Feedforward neural nets
Feedforward neural nets
core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D.*, + , *T-IM Feb 00* 154-160
gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S.*, + , *T-IM Apr 00* 424-428
Feedforward neural nets; cf. Radial basis function networks
Ferrimagnetic materials; cf. Ferrites
Ferrites
current sens., domain wall motion in orthoferrites. *Didosyan, Y.S.*, + , *T-IM Feb 00* 14-18
Ferromagnetic materials
FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H.*, + , *T-IM Jun 00* 648-652
Ferromagnetism; cf. Ferromagnetic materials
Fiber lasers
Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I.*, + , *T-IM Aug 00* 762-765
Fiber lasers; cf. Optical fiber amplifiers
Fiber optic gyroscopes
intelligent strategy for improving meas. precision of FOG. *Zhu, R.*, + , *T-IM Dec 00* 1183-1188
Fiber optic sensors
CdTe EO sens. for elec. and mag. fields. *Cecelja, F.*, + , *T-IM Jun 00* 483-487
differential interferometer, strain meas. *Libo Yuan*, + , *T-IM Aug 00* 779-782
intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J.*, + , *T-IM Apr 00* 405-408
multifiber opt. sens. for temp. meas. *Betta, G.*, + , *T-IM Oct 00* 1004-1008
photoelastic fiber opt. press. sens., improved long-term stabil. *Changsen Sun*, + , *T-IM Aug 00* 776-778
press. & temp. sens., HiBi fiber, coherence MUX. *Bock, W.J.*, + , *T-IM Apr 00* 392-397
temp. sens., intrinsic, ref. liq. refr. index based. *Betta, G.*, + , *T-IM Feb 00* 25-29
Fiber optic sensors; cf. Fiber optic gyroscopes
Fibers; cf. Carbon fibers; Optical fibers
Field buses
smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B.*, + , *T-IM Jun 00* 621-627
Field effect integrated circuits; cf. Field effect MMIC; MESFET integrated circuits
Field effect MMIC
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H.*, + , *T-IM Feb 00* 172-177
Field effect transistor circuits; cf. JFET circuits
Field effect transistors; cf. Field effect transistor switches; Schottky gate field effect transistors
Field effect transistor switches
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H.*, + , *T-IM Feb 00* 172-177
Field programmable gate arrays
interpolating time counter, single FPGA device, 100 ps resoln. *Szplet, R.*, + , *T-IM Aug 00* 879-883
Field strength measurement
directional antennas calib., errors. *Trzaska, H.*, *T-IM Oct 00* 1112-1116
Field strength measurement; cf. Electric field measurement; Magnetic field measurement
Films; cf. Polymer films; Thin films
Filtering theory
3D objs. automatic acquisition, portable modular syst. *Borghese, N.A.*, + , *T-IM Oct 00* 1128-1136
IR image registration and reconstruction, multiple video frames. *Alam, M.S.*, + , *T-IM Oct 00* 915-923
knock acoustic sig. estim. using parametric inversion. *Boubal, O.*, + , *T-IM Aug 00* 890-895
nonlin. averaging, PSD estim. algms. *Attivissimo, F.*, + , *T-IM Oct 00* 1036-1042
spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P.*, + , *T-IM Apr 00* 449-454
Filtering theory; cf. Smoothing methods
Filters
microgravity isolation, implicit freq. weighting. *Hampton, R.D.*, + , *T-IM Apr 00* 265-269

Filters; cf. Active filters; Adaptive filters; Butterworth filters; Digital filters; High-pass filters; Kalman filters; Low-pass filters; Nonlinear filters; Wiener filters

Finite difference methods; cf. Finite difference time-domain analysis

Finite difference time-domain analysis

CdTe EO sens. for elec. and mag. fields. *Cecelja, F., + , T-IM Jun 00* 483-487

Finite element analysis

tumor therapeutic US heating, FEA simul. *Jarosz, B.J., T-IM Apr 00* 260-264

Fires

opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42

smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062

Flaw detection

Lamb-wave US NDE sig. anal., wavelet-transform-based method. *Legendre, S., + , T-IM Jun 00* 524-530

Flaw detection; cf. Crack detection

Flexible manipulators

modal estim., multisens. combination schemes. *Li, Y.F., + , T-IM Jun 00* 565-572

Flexible structures; cf. Flexible manipulators

Flow; cf. Confined flow

Flow measurement

flue gas flow meas. using neural networks, sens. locations optim. *Kang, H., + , T-IM Apr 00* 228-233

Flow measurement; cf. Blood flow measurement; Flow visualization

Flowmeters

EM flowmeter for open channels, dry calib. procedure. *Michalski, A., T-IM Apr 00* 434-438

vortex whistle, freq.-detecting flowmeter use, fluidic oscillator. *Sato, H., + , T-IM Feb 00* 200-205

Flow visualization

vortex whistle, freq.-detecting flowmeter use, fluidic oscillator. *Sato, H., + , T-IM Feb 00* 200-205

Fluid dynamics; cf. Fluid oscillations

Fluidic devices

vortex whistle, freq.-detecting flowmeter use, fluidic oscillator. *Sato, H., + , T-IM Feb 00* 200-205

Fluidics; cf. Fluidic devices

Fluid oscillations

vortex whistle, freq.-detecting flowmeter use, fluidic oscillator. *Sato, H., + , T-IM Feb 00* 200-205

FM radar

envelope delay FSCW radar for multiple-target appl. *Maskell, D.L., + , T-IM Aug 00* 710-715

Food processing industry

FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L., + , T-IM Aug 00* 710-715

Force feedback

hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A., + , T-IM Apr 00* 388-391

Force measurement

hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A., + , T-IM Apr 00* 388-391

Force sensors

multi-axis force sens., dyn. decoupling and compensation. *Ke-Jun Xu, + , T-IM Oct 00* 935-941

Formal logic; cf. Fuzzy logic

Frequency converters; cf. Frequency multipliers

Frequency-domain analysis

freq. anal. of elec. impedance tomography syst. *Szczepanik, Z., + , T-IM Aug 00* 844-851

lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., + , T-IM Jun 00* 602-609

lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., + , T-IM Jun 00* 610-616

multifreq. sig. param., freq.-domain-based least sq. estim. *Carbone, P., + , T-IM Jun 00* 555-558

online frequency domain syst. identification based on virtual instrument. *Nemeth, J.G., + , T-IM Dec 00* 1260-1263

Frequency-domain analysis; cf. Time-frequency analysis

Frequency estimation

distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K., + , T-IM Aug 00* 746-753

intelligent strategy for improving meas. precision of FOG. *Handel, P., T-IM Dec 00* 1189-1193

sens. sig. params. estim., DSP approach. *Bertocco, M., + , T-IM Jun 00* 685-689

Frequency measurement

distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K., + , T-IM Aug 00* 746-753

instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A., + , T-IM Aug 00* 783-789

measuring slowly changing AC sigs. without sample-and-hold cct. *Petrovic, P., + , T-IM Dec 00* 1245-1248

traction rails at 50 Hz, internal impedance mes. *Mariscotti, A., + , T-IM Apr 00* 294-299

Frequency measurement; cf. Frequency standards

Frequency modulation

chirped-FM US range sens., local meas. validation. *Mauris, G., + , T-IM Aug 00* 835-839

Frequency multipliers

resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., + , T-IM Jun 00* 585-590

Frequency response

CMOS OTA, CMRR freq. response, integrated amp. design. *Giustolisi, G., + , T-IM Feb 00* 137-143

lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., + , T-IM Jun 00* 602-609

lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., + , T-IM Jun 00* 610-616

meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen, + , T-IM Feb 00* 77-82

Frequency stability

ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K., + , T-IM Feb 00* 19-24

Frequency standards

microwave freq. reference based on VCSEL-driven dark line resonances in Cs vapor. *Kitching, J., + , T-IM Dec 00* 1313-1317

ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K., + , T-IM Feb 00* 19-24

Frequency synthesizers; cf. Direct digital synthesis

Friction

viscous and coulomb friction, meas. procedure. *Kelly, R., + , T-IM Aug 00* 857-861

Functional analysis; cf. Harmonic analysis

Function approximation

lin., polynomial models with accurate derivative. *Broersen, P.M.T., T-IM Oct 00* 910-914

Function generators; cf. Pulse generators; Waveform generators

Functions; cf. Bessel functions; Transfer functions

Fusion reactor instrumentation

EM transducers in thermonuclear fusion expt. RFX. *Fiorentin, P., + , T-IM Apr 00* 290-293

Fusion reactors; cf. Fusion reactor instrumentation

Fuzzy logic

noise removal from image data, recursive neurofuzzy filters. *Russo, F., T-IM Apr 00* 307-314

Fuzzy neural nets

gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S., + , T-IM Apr 00* 424-428

noise removal from image data, recursive neurofuzzy filters. *Russo, F., T-IM Apr 00* 307-314

Fuzzy set theory

fuzzy modeling of meas. data acquired from physical sensors. *Mauris, G., + , T-IM Dec 00* 1201-1205

instrum. meas. errors, uncertainty handling, fuzzy/possibility approach. *Mauris, G., + , T-IM Feb 00* 89-93

Fuzzy systems

ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S., + , T-IM Oct 00* 998-1003

G

Gain measurement

horn antenna anal., gain-transfer method anal. *Mayhew-Ridgers, G., + , T-IM Oct 00* 949-958

Gallium arsenide

GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., + , T-IM Feb 00* 172-177

Gallium compounds; cf. Gallium arsenide

Gas sensors

electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F., + , T-IM Aug 00* 809-812

gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S., + , T-IM Apr 00* 424-428

hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., + , T-IM Aug 00* 852-856

opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42

smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062

- **Gas turbines**
  - YVO$_4$:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P., +, T-IM Feb 00* 129-131
- **Gaussian distribution**
  - concrete, aggregate conc./compressive strength, microwave near-field refl. *Bois, K.J., +, T-IM Feb 00* 49-55
  - rly. track profile meas., composite real-time image proc. *Alippi, C., +, T-IM Jun 00* 559-564
- **Gaussian noise**
  - ADC, noise power ratio testing, mid-riser formulation. *Irons, F.H., +, T-IM Jun 00* 659-665
  - intelligent strategy for improving meas. precision of FOG. *Handel, P., T-IM Dec 00* 1189-1193
- **Gaussian noise; cf.** AWGN
- **Gaussian processes; cf.** Gaussian noise
- **Generalization (artificial intelligence)**
  - rly. track profile meas., composite real-time image proc. *Alippi, C., +, T-IM Jun 00* 559-564
- **Genetic algorithms**
  - microwave imaging, inverse scatt., GA based image reconstr. *Pastorino, M., +, T-IM Jun 00* 573-578
  - noise removal from image data, recursive neurofuzzy filters. *Russo, F., T-IM Apr 00* 307-314
  - spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., +, T-IM Apr 00* 449-454
- **Geophysical equipment; cf.** Atmospheric measuring apparatus
- **Geophysical techniques**
  - generic automated/semiautomated digital multi-electrode instrument for field resistivity meas. *Werkema, D.D., +, T-IM Dec 00* 1249-1253
  - soil moisture meas. as fn. of depth. *Holdem, J.R., +, T-IM Oct 00* 964-970
- **Giant magnetoresistance**
  - FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H., +, T-IM Jun 00* 648-652
- **Gradient index optics**
  - fiber opt. differential interferometer, strain meas. *Libo Yuan, +, T-IM Aug 00* 779-782
  - photoelastic fiber opt. press. sens., improved long-term stabil. *Changsen Sun, +, T-IM Aug 00* 776-778
- **Gradient methods**
  - 2D objs. microwave imaging, FEA appl. *Rekanos, I.T., +, T-IM Apr 00* 234-239
- **Granular materials; cf.** Powders
- **Graphical user interfaces**
  - integrated bearing condition monitoring, virtual instrum. syst. *Wang, C., +, T-IM Apr 00* 325-332
- **Graph theory**
  - some aspects of pseudo random binary array-based surface charactn. *Spoelder, H.J.W., +, T-IM Dec 00* 1331-1336
- **Gyroscopes; cf.** Fiber optic gyroscopes

H

- **Hall effect; cf.** Quantum Hall effect
- **Hall effect devices; cf.** Hall effect transducers
- **Hall effect transducers**
  - magneto-dosimeter, MCM based integrated 3D mag. microsyst. *Malcovati, P., +, T-IM Apr 00* 341-345
- **Harmonic analysis**
  - AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P., +, T-IM Feb 00* 166-171
- **Harmonic distortion**
  - ADC, noise power ratio testing, mid-riser formulation. *Irons, F.H., +, T-IM Jun 00* 659-665
  - elec. instrum. calib., nonsinusoidal conditions, test waveform selection. *Ferrero, A., +, T-IM Apr 00* 382-387
  - losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L., +, T-IM Apr 00* 315-319
  - power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P., +, T-IM Aug 00* 790-794
- **Harmonics; cf.** Power system harmonics
- **Heat transfer; cf.** Cooling
- **Hemodynamics; cf.** Blood flow measurement; Blood pressure measurement
- **High energy physics instrumentation computing**
  - gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076
  - multidimensional random pulses generation for radioactivity meas. *Kot-Nawrocki, E.P., +, T-IM Aug 00* 754-761
- **High-frequency effects; cf.** Skin effect
- **High-pass filters**
  - phase detector, freq. insensitive, fast response/low ripple. *Vyroubal, D., T-IM Oct 00* 1077-1082
- **High-speed integrated circuits**
  - GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., +, T-IM Feb 00* 172-177
- **High-temperature electronics**
  - high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C., +, T-IM Apr 00* 365-370
- **High-temperature techniques**
  - YVO$_4$:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P., +, T-IM Feb 00* 129-131
- **High-temperature techniques; cf.** High-temperature electronics
- **High-voltage engineering; cf.** High-voltage techniques
- **High-voltage techniques**
  - HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C., +, T-IM Jun 00* 550-554
- **Horn antennas**
  - gain-transfer method for antenna anal. *Mayhew-Ridgers, G., +, T-IM Oct 00* 949-958
- **Hough transforms**
  - PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E., +, T-IM Feb 00* 94-99
- **Humanities; cf.** Art
- **Humidity sensors**
  - ADC with piecewise linear characteristic, case study-implementation of smart humidity sensor. *Bucci, G., +, T-IM Dec 00* 1154-1166
- **Hyperthermia**
  - MR power sens. for tissue meas. *Vountesmeri, V., +, T-IM Jun 00* 513-516
- **Hysteresis; cf.** Magnetic hysteresis

I

- **Identification**
  - ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S., +, T-IM Oct 00* 998-1003
  - lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., +, T-IM Jun 00* 602-609
  - lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., +, T-IM Jun 00* 610-616
  - online frequency domain syst. identification based on virtual instrument. *Nemeth, J.G., +, T-IM Dec 00* 1260-1263
- **Identification; cf.** Parameter estimation; State estimation
- **IEEE standards**
  - intelligent strategy for improving meas. precision of FOG. *Handel, P., T-IM Dec 00* 1189-1193
  - smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B., +, T-IM Jun 00* 621-627
- **III-V semiconductors**
  - GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., +, T-IM Feb 00* 172-177
- **II-VI semiconductors**
  - CdTe EO sens. for elec. and mag. fields. *Cecelja, F., +, T-IM Jun 00* 483-487
- **Image processing**
  - NDT data fusion techs., pixel-level. *Gros, X.E., +, T-IM Oct 00* 1083-1090
  - phase-sensitive vision for moving targets posn. meas. *Sandoz, P., +, T-IM Aug 00* 867-872
  - uncertainty charactn. in image-based meas. *De Santo, M., +, T-IM Oct 00* 1101-1107
- **Image processing; cf.** Computerized tomography; Computer vision; Image recognition; Image reconstruction; Image registration; Image resolution; Image restoration; Image segmentation; Medical image processing
- **Image processing equipment; cf.** Image scanners
- **Image recognition**
  - skin nevoid lesions diagnosis, 3D meas. syst. *Caslellini, P., +, T-IM Oct 00* 924-928
  - stochastic texture image estimators, spatial anisotropy variability. *Scharcanski, J., +, T-IM Oct 00* 971-979
- **Image recognition; cf.** Edge detection; Image texture
- **Image reconstruction**
  - 2D objs. microwave imaging, FEA appl. *Rekanos, I.T., +, T-IM Apr 00* 234-239
  - 3D objs. automatic acquisition, portable modular syst. *Borghese, N.A., +, T-IM Oct 00* 1128-1136
  - IR image registration and reconstruction, multiple video frames. *Alam, M.S., +, T-IM Oct 00* 915-923
  - Lamb-wave US NDE sig. anal., wavelet-transform-based method. *Legendre, S., +, T-IM Jun 00* 524-530
  - microwave imaging, inverse scatt., GA based image reconstr. *Pastorino, M., +, T-IM Jun 00* 573-578
- **Image registration**
  - IR image registration and reconstruction, multiple video frames. *Alam, M.S., +, T-IM Oct 00* 915-923

+ Check author entry for coauthors

Image resolution
- IR image registration and reconstruction, multiple video frames. *Alam, M.S., +, T-IM Oct 00* 915-923

Image restoration
- noise removal from image data, recursive neurofuzzy filters. *Russo, F., T-IM Apr 00* 307-314
- rly. track profile meas., composite real-time image proc. *Alippi, C., +, T-IM Jun 00* 559-564

Image scanners
- 3D objs. automatic acquisition, portable modular syst. *Borghese, N.A., +, T-IM Oct 00* 1128-1136

Image segmentation
- NDT data fusion techs., pixel-level. *Gros, X.E., +, T-IM Oct 00* 1083-1090

Image sensors
- 3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G., +, T-IM Jun 00* 628-636
- AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., +, T-IM Aug 00* 813-819
- IR image registration and reconstruction, multiple video frames. *Alam, M.S., +, T-IM Oct 00* 915-923

Image texture
- stochastic texture image estimators, spatial anisotropy variability. *Scharcanski, J., +, T-IM Oct 00* 971-979

Imaging; cf. Biomedical imaging; Infrared imaging; Microwave imaging; Tomography; X-ray imaging

Impact testing
- coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497

Inclusions
- fiber with open cavity, cond. microwave meas. *Sagnard, F., +, T-IM Oct 00* 942-948

Industrial control
- stochastic texture image estimators, spatial anisotropy variability. *Scharcanski, J., +, T-IM Oct 00* 971-979

Industrial robots
- AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., +, T-IM Aug 00* 813-819

Industries; cf. Food processing industry; Paper industry

Inference mechanisms
- noise removal from image data, recursive neurofuzzy filters. *Russo, F., T-IM Apr 00* 307-314

Information networks; cf. Internet

Information resources
- Web-based distributed virtual educational lab. *Benetazzo, L., +, T-IM Apr 00* 349-356

Information services; cf. Information resources

Information theory; cf. Encoding; Error statistics; Filtering theory

Infrared detectors
- AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., +, T-IM Aug 00* 813-819
- IR image registration and reconstruction, multiple video frames. *Alam, M.S., +, T-IM Oct 00* 915-923

Infrared imaging
- IR image registration and reconstruction, multiple video frames. *Alam, M.S., +, T-IM Oct 00* 915-923

Inspection
- cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, +, T-IM Feb 00* 120-128

Inspection; cf. Automatic optical inspection

Instrumentation
- selected papers IMTC'99 (special issue). *T-IM Apr 00* 210-467
- selected papers IMTC'99 (special issue). *T-IM Jun 00* 470-705

Instrumentation; cf. Aerospace instrumentation; Computerized instrumentation; Digital instrumentation; Instruments; Signal processing equipment

Instrumentation amplifiers
- CMOS OTA, CMRR freq. response, integrated amp. design. *Giustolisi, G., +, T-IM Feb 00* 137-143
- current mode instrumentation amplifier (CMIA) topology. *Azhari, S.J., +, T-IM Dec 00* 1272-1277
- high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C., +, T-IM Apr 00* 365-370

Instrumentation and Measurement Technology Conference, 16th (1999) IEEE
- selected papers (special issue). *T-IM Jun 00* 470-705

Instrumentation and Measurement Technology Conference, 1999
- selected papers (special issue). *T-IM Apr 00* 210-467

Instruments
- elec. instrum. calib., nonsinusoidal conditions, test waveform selection. *Ferrero, A., +, T-IM Apr 00* 382-387
- instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G., +, T-IM Feb 00* 100-107
- PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E., +, T-IM Feb 00* 94-99
- stability eval. of high-precision multifunction instruments for traceability transfer. *Cassiago, C., +, T-IM Dec 00* 1206-1210

Instruments; cf. Bridge instruments; Clocks; Hall effect transducers; Portable instruments; Pressure transducers; Sensors; Spectrometers

Integrated circuit design; cf. Integrated circuit layout

Integrated circuit interconnections
- accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F., +, T-IM Aug 00* 716-720
- LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., +, T-IM Jun 00* 546-549

Integrated circuit layout
- multiple-stage OTA-C filters, testable design. *Cheng-Chung Hsu, +, T-IM Oct 00* 929-934

Integrated circuit measurement
- IC package shielding effectiveness meas., integrated antenna use. *Roy, L., +, T-IM Apr 00* 409-412
- LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., +, T-IM Jun 00* 546-549

Integrated circuit noise
- accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F., +, T-IM Aug 00* 716-720
- ADC, noise power ratio testing, mid-riser formulation. *Irons, F.H., +, T-IM Jun 00* 659-665

Integrated circuit packaging
- high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C., +, T-IM Apr 00* 365-370
- shielding effectiveness meas., integrated antenna use. *Roy, L., +, T-IM Apr 00* 409-412

Integrated circuit reliability
- accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F., +, T-IM Aug 00* 716-720

Integrated circuits; cf. High-speed integrated circuits

Integrated circuit technology
- phase-sensitive vision for moving targets posn. meas. *Sandoz, P., +, T-IM Aug 00* 867-872

Integrated circuit technology; cf. Integrated circuit interconnections; Integrated circuit measurement; Integrated circuit packaging

Integrated circuit testing
- accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F., +, T-IM Aug 00* 716-720
- ADC, noise power ratio testing, mid-riser formulation. *Irons, F.H., +, T-IM Jun 00* 659-665
- IC package shielding effectiveness meas., integrated antenna use. *Roy, L., +, T-IM Apr 00* 409-412
- oscill. test, act. low pas filter appl. *Wong, M.W.-T., T-IM Apr 00* 240-245
- VLSI ccts. BIST, space compression. *Das, S.R., +, T-IM Jun 00* 690-705

Integrated optics
- automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C., +, T-IM Feb 00* 32-36

Integrated optics; cf. Optical planar waveguides

Integrated voice/data communication
- data traffic meas., speech/voice-band data class. *Benetazzo, L., +, T-IM Apr 00* 413-417

Integrating circuits
- arbitrary power law device based on integrators. *Kiranon, R., +, T-IM Dec 00* 1176-1182
- lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S., T-IM Feb 00* 151-153
- reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808

Intelligent sensors
- capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li, +, T-IM Jun 00* 531-534
- chirped-FM US range sens., local meas. validation. *Mauris, G., +, T-IM Aug 00* 835-839
- electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F., +, T-IM Aug 00* 809-812
- high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C., +, T-IM Apr 00* 365-370
- lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S., T-IM Feb 00* 151-153
- press. sens. using neural networks. *Patra, J.C., +, T-IM Aug 00* 829-834
- smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B., +, T-IM Jun 00* 621-627

Intensity modulation
- low fiber opt. atten. meas. using double sq.-law detect. *Singh, R., +, T-IM Feb 00* 30-31

+ Check author entry for coauthors

Interconnections; cf. Integrated circuit interconnections

Interference; cf. Interference (signal)

Interference (signal)

optimal noise level in stochastic systs., params. meas. *Ando, B.*, + , *T-IM Oct 00* 1137-1143

Interference (signal); cf. Electromagnetic interference

Interference suppression

distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K.*, + , *T-IM Aug 00* 746-753

noise removal from image data, recursive neurofuzzy filters. *Russo, F.*, *T-IM Apr 00* 307-314

optimal noise level in stochastic systs., params. meas. *Ando, B.*, + , *T-IM Oct 00* 1137-1143

robust broadband periodic excitation design. *Simon, G.*, + , *T-IM Apr 00* 270-274

Internal combustion engines

knock acoustic sig. estim. using parametric inversion. *Boubal, O.*, + , *T-IM Aug 00* 890-895

sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J.*, + , *T-IM Jun 00* 503-508

Internet

geographic network for rem. test expts. *Arpaia, P.*, + , *T-IM Oct 00* 992-997

smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B.*, + , *T-IM Jun 00* 621-627

Internetworking; cf. LAN interconnection

Interpolation

DFT lin. interpolation method. *Borkowski, J.*, *T-IM Aug 00* 741-745

error measures for resampled irregular data. *de Waele, S.*, + , *T-IM Apr 00* 216-222

interpolating time counter, single FPGA device, 100 ps resoln. *Szplet, R.*, + , *T-IM Aug 00* 879-883

Intranets

Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young*, + , *T-IM Jun 00* 579-584

Inverse problems

2D objs. microwave imaging, FEA appl. *Rekanos, I.T.*, + , *T-IM Apr 00* 234-239

brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A.*, + , *T-IM Jun 00* 591-595

fluxset probe based meas. syst. for NDT, crack shape/posn. reconstr. *Bernieri, A.*, + , *T-IM Apr 00* 455-459

hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P.*, + , *T-IM Aug 00* 852-856

knock acoustic sig. estim. using parametric inversion. *Boubal, O.*, + , *T-IM Aug 00* 890-895

microwave imaging, inverse scatt., GA based image reconstr. *Pastorino, M.*, + , *T-IM Jun 00* 573-578

nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S.*, + , *T-IM Jun 00* 653-658

Inverse problems; cf. Deconvolution; Signal reconstruction

Inverters

power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P.*, + , *T-IM Aug 00* 790-794

Iron alloys

FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H.*, + , *T-IM Jun 00* 648-652

Iron compounds; cf. Ferrites

ISO standards

instrum. meas. errors, uncertainty handling, fuzzy/possibility approach. *Mauris, G.*, + , *T-IM Feb 00* 89-93

quality mgt. problems for elec. as processed material. *Sasdelli, R.*, + , *T-IM Apr 00* 460-467

Iterative methods

microspectrometer design, digital correction, rational filters. *Wisniewski, M.P.*, + , *T-IM Feb 00* 43-48

Iterative methods; cf. Gradient methods

J

JFET circuits

meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen*, + , *T-IM Feb 00* 77-82

Jitter; cf. Timing jitter

K

Kalman filters

distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K.*, + , *T-IM Aug 00* 746-753

flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F.*, + , *T-IM Jun 00* 565-572

instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G.*, + , *T-IM Feb 00* 100-107

lin., polynomial models with accurate derivative. *Broersen, P.M.T.*, *T-IM Oct 00* 910-914

Kalman filters; cf. Adaptive Kalman filters

Kinematics

multifactorial movement anal. in weightlessness. *Baroni, G.*, + , *T-IM Jun 00* 476-482

Knowledge based systems

ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S.*, + , *T-IM Oct 00* 998-1003

Knowledge engineering; cf. Inference mechanisms

Knowledge representation; cf. Belief networks

L

Laboratories

geographic network for rem. test expts. *Arpaia, P.*, + , *T-IM Oct 00* 992-997

Web-based distributed virtual educational lab. *Benetazzo, L.*, + , *T-IM Apr 00* 349-356

Laboratory techniques

precision temp. calib. lab., automation, software reliab. *Bojkovski, J.*, + , *T-IM Jun 00* 596-601

LAN interconnection

Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young*, + , *T-IM Jun 00* 579-584

Laplace transforms

opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J.*, *T-IM Feb 00* 37-42

Large scale integration; cf. VLSI

Laser applications

measuring distance between graduation lines on graduated scales using electrical test structure metrology. *Penzes, W.B.*, + , *T-IM Dec 00* 1285-1288

Laser applications in medicine

self-mixing laser speckle velocimeter for blood flow meas. *Ozdemir, S.K.*, + , *T-IM Oct 00* 1029-1035

skin nevoid lesions diagnosis, 3D meas. syst. *Caslellini, P.*, + , *T-IM Oct 00* 924-928

Laser beam applications

HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C.*, + , *T-IM Jun 00* 550-554

Laser beam applications; cf. Laser applications in medicine; Measurement by laser beam

Laser Doppler anemometry

LDA receiving head, opt. fiber preamp., improved SNR. *Tobben, H.*, + , *T-IM Feb 00* 10-13

Laser feedback

LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P.*, *T-IM Feb 00* 2-4

self-mixing laser speckle velocimeter for blood flow meas. *Ozdemir, S.K.*, + , *T-IM Oct 00* 1029-1035

Laser mode locking

Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I.*, + , *T-IM Aug 00* 762-765

Laser ranging

FMCW-like method. *Journet, B.*, + , *T-IM Aug 00* 840-843

integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F.*, + , *T-IM Dec 00* 1167-1175

Lasers; cf. Ring lasers; Surface emitting lasers

Laser variables measurement

automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C.*, + , *T-IM Feb 00* 32-36

Laser velocimeters

LDA receiving head, opt. fiber preamp., improved SNR. *Tobben, H.*, + , *T-IM Feb 00* 10-13

Laser velocimetry

self-mixing laser speckle velocimeter for blood flow meas. *Ozdemir, S.K.*, + , *T-IM Oct 00* 1029-1035

Lead bonding

high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C.*, + , *T-IM Apr 00* 365-370

Learning (artificial intelligence)

gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S.*, + , *T-IM Apr 00* 424-428

intelligent strategy for improving meas. precision of FOG. *Zhu, R.*, + , *T-IM Dec 00* 1183-1188

noise removal from image data, recursive neurofuzzy filters. *Russo, F.*, *T-IM Apr 00* 307-314

Learning (artificial intelligence); cf. Backpropagation

Least mean squares methods
- blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A.*, + , *T-IM Jun 00* 541-545
- intelligent strategy for improving meas. precision of FOG. *Handel, P.*, *T-IM Dec 00* 1189-1193

Least squares approximations
- intelligent strategy for improving meas. precision of FOG. *Zhu, R.*, + , *T-IM Dec 00* 1183-1188
- intelligent strategy for improving meas. precision of FOG. *Handel, P.*, *T-IM Dec 00* 1189-1193
- multifreq. sig. param., freq.-domain-based least sq. estim. *Carbone, P.*, +, *T-IM Jun 00* 555-558

Least squares approximations; cf. Least mean squares methods

Level measurement
- 1D acoustical gas resonator for fluid level meas. *Donlagic, D.*, + , *T-IM Oct 00* 1095-1100
- liq. level microwave gaging, permitt. meas. *Weiss, M.*, + , *T-IM Jun 00* 488-492

Life testing
- accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F.*, + , *T-IM Aug 00* 716-720

Light coherence
- automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C.*, + , *T-IM Feb 00* 32-36

Light emitting devices; cf. Light emitting diodes

Light emitting diodes
- logarithmic LED electrometer, low DC current meas. *Acharya, Y.B.*, + , *T-IM Feb 00* 5-9

Light emitting diodes; cf. Superluminescent diodes

Light interferometers
- fiber opt. press. & temp. sens., HiBi fiber, coherence MUX. *Bock, W.J.*, + , *T-IM Apr 00* 392-397
- intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J.*, + , *T-IM Apr 00* 405-408

Light interferometers; cf. Mach-Zehnder interferometers; Michelson interferometers

Light interferometry
- automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C.*, + , *T-IM Feb 00* 32-36
- measuring distance between graduation lines on graduated scales using electrical test structure metrology. *Penzes, W.B.*, + , *T-IM Dec 00* 1285-1288
- small amplit. sinusoidal vibr. meas., Michelson interferometry. *Ivaschescu, V.*, *T-IM Jun 00* 643-647

Light interferometry; cf. Electronic speckle pattern interferometry

Lightning
- broadband radio interferometer, seq. trigger, lightning emitted sources. *Mardiana, R.*, + , *T-IM Apr 00* 376-381

Light polarization
- CdTe EO sens. for elec. and mag. fields. *Cecelja, F.*, + , *T-IM Jun 00* 483-487
- comparison of wavelength dependent polarization dependent loss meas. in fiber gratings. *Zhu, Y.*, + , *T-IM Dec 00* 1231-1239

Light polarization; cf. Optical fiber polarization

Light scattering
- dust monitor using integrat. sphere, real-time meas. *Watanabe, K.*, + , *T-IM Jun 00* 679-684

Linear algebra; cf. Matrix algebra

Linearization techniques
- polynomial models with accurate derivative. *Broersen, P.M.T.*, *T-IM Oct 00* 910-914

Linear network analysis
- resistor-induced thermal noise, generalization. *Giannetti, R.*, *T-IM Feb 00* 87-88

Linear systems
- lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C.*, + , *T-IM Jun 00* 602-609
- lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C.*, + , *T-IM Jun 00* 610-616

Liquid mixtures
- ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M.*, + , *T-IM Feb 00* 114-119

Liquids; cf. Dielectric liquids; Liquid mixtures

Lithography; cf. Photolithography

Load management; cf. Load regulation

Load regulation
- harmonic losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L.*, + , *T-IM Apr 00* 315-319

Local area networks; cf. Controller area networks

Logic; cf. Logic testing

Logic testing
- mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K.*, + , *T-IM Jun 00* 671-678
- VLSI ccts. BIST, space compression. *Das, S.R.*, + , *T-IM Jun 00* 690-705

Log periodic antennas
- directional antennas calib., errors. *Trzaska, H.*, *T-IM Oct 00* 1112-1116

Losses; cf. Optical losses

Loss measurement
- harmonic losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L.*, + , *T-IM Apr 00* 315-319

Loss measurement; cf. Optical loss measurement

Low-pass filters
- IC testing by oscill. test methodology. *Wong, M.W.-T.*, *T-IM Apr 00* 240-245

Low-temperature techniques
- nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P.*, + , *T-IM Apr 00* 253-255

Luminescence
- integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F.*, + , *T-IM Dec 00* 1167-1175

Luminescence; cf. Photoluminescence

Lung
- methacholine detect., time series models of lung sounds. *Broersen, P.M.T.*, + , *T-IM Jun 00* 517-523

M

Machine bearings
- integrated bearing condition monitoring, virtual instrum. syst. *Wang, C.*, + , *T-IM Apr 00* 325-332

Machine tools
- geom. error compensation of precision motion systs. *Tan, K.K.*, + , *T-IM Oct 00* 984-991

Mach-Zehnder interferometers
- Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I.*, + , *T-IM Aug 00* 762-765

Magnetic cores
- core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D.*, + , *T-IM Feb 00* 154-160

Magnetic devices; cf. Magnetoresistive devices

Magnetic domains; cf. Magnetic domain walls

Magnetic domain walls
- core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D.*, + , *T-IM Feb 00* 154-160
- current sens., domain wall motion in orthoferrites. *Didosyan, Y.S.*, + , *T-IM Feb 00* 14-18

Magnetic field effects; cf. Magnetic levitation

Magnetic field measurement
- CdTe EO sens. for elec. and mag. fields. *Cecelja, F.*, + , *T-IM Jun 00* 483-487
- magneto-dosimeter, MCM based integrated 3D mag. microsyst. *Malcovati, P.*, + , *T-IM Apr 00* 341-345
- nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P.*, + , *T-IM Apr 00* 253-255

Magnetic hysteresis
- core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D.*, + , *T-IM Feb 00* 154-160

Magnetic levitation
- kg unit of mass using supercond. MAGLEV. *Shiota, F.*, + , *T-IM Oct 00* 1117-1121

Magnetic materials; cf. Amorphous magnetic materials; Ferromagnetic materials; Paramagnetic materials

Magnetic sensors
- FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H.*, + , *T-IM Jun 00* 648-652
- fluxset probe based meas. syst. for NDT, crack shape/posn. reconstr. *Bernieri, A.*, + , *T-IM Apr 00* 455-459
- magneto-dosimeter, MCM based integrated 3D mag. microsyst. *Malcovati, P.*, + , *T-IM Apr 00* 341-345

Magnetic sensors; cf. Magneto-optical sensors

Magnetic variables measurement; cf. Magnetic field measurement

Magnetism; cf. Magnetization

Magnetization
- nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P.*, + , *T-IM Apr 00* 253-255

Magnetization; cf. Magnetic hysteresis
Magnetometers; cf. SQUID magnetometers
Magneto-optical devices; cf. Magneto-optical sensors
Magneto-optical effects; cf. Faraday effect
Magneto-optical sensors
CdTe EO sens. for elec. and mag. fields. *Cecelja, F., + , T-IM Jun 00* 483-487
current sens., domain wall motion in orthoferrites. *Didosyan, Y.S., + , T-IM Feb 00* 14-18
error anal. of opt. current transducer operating with digital signal proc. syst. *Niewczas, P., + , T-IM Dec 00* 1254-1259
Faraday effect elec. current sens. design, improved sensitivity. *Yi, B., + , T-IM Apr 00* 418-423
Magnetoresistance; cf. Giant magnetoresistance
Magnetoresistive devices
power sens. for tissue meas., absorbed power determ. *Vountesmeri, V., + , T-IM Jun 00* 513-516
Maintenance engineering
rly. track profile meas., composite real-time image proc. *Alippi, C., + , T-IM Jun 00* 559-564
Management; cf. Quality management
Manipulators; cf. Flexible manipulators
Mass measurement
kg unit of mass using supercond. MAGLEV. *Shiota, F., + , T-IM Oct 00* 1117-1121
moisture meas. using cylindrical resonating cavity. *Bourdel, E., + , T-IM Oct 00* 1023-1028
Materials; cf. Ceramics; Composite materials; Semiconductor materials
Materials handling
AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., + , T-IM Aug 00* 813-819
Materials testing; cf. Corrosion testing; Impact testing; Nondestructive testing
Mathematical analysis; cf. Approximation theory; Bessel functions; Frequency-domain analysis; Inverse problems; Modal analysis; Time-domain analysis
Mathematical operators
microspectrometer design, digital correction, rational filters. *Wisniewski, M.P., + , T-IM Feb 00* 43-48
Mathematics; cf. Convergence; Mathematical operators; Optimization; Probability
Matrix algebra
multi-axis force sens., dyn. decoupling and compensation. *Ke-Jun Xu, + , T-IM Oct 00* 935-941
Matrix algebra; cf. Covariance matrices
Maximum likelihood estimation
estimator for jitter noise models. *Vandersteen, G., + , T-IM Dec 00* 1282-1284
multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C., + , T-IM Jun 00* 637-642
Mean square error methods
dithered quantizers, stochastic & deterministic, perform. *Carbone, P., + , T-IM Apr 00* 337-340
Mean square error methods; cf. Least mean squares methods
Measurement
selected papers IMTC'99 (special issue). *T-IM Apr 00* 210-467
selected papers IMTC'99 (special issue). *T-IM Jun 00* 470-705
Measurement; cf. Biomedical measurement; Chemical variables measurement; Dosimetry; Electric variables measurement; Field strength measurement; Integrated circuit measurement; Laser variables measurement; Loss measurement; Mass measurement; Measurement by laser beam; Mechanical variables measurement; Microwave measurement; Optical variables measurement; Polarimetry; Power system measurement; UHF measurement
Measurement by laser beam
dust monitor using integrat. sphere, real-time meas. *Watanabe, K., + , T-IM Jun 00* 679-684
rly. track profile meas., composite real-time image proc. *Alippi, C., + , T-IM Jun 00* 559-564
small amplit. sinusoidal vibr. meas., Michelson interferometry. *Ivaschescu, V., T-IM Jun 00* 643-647
Measurement by laser beam; cf. Laser Doppler anemometry; Laser ranging; Laser velocimetry
Measurement errors
calib.-free temp. meas., p-n jn. i-u charact. model. *Kanoun, O., T-IM Aug 00* 901-904
capacitance meas., relax. oscillator limitations. *Yili Liu, + , T-IM Oct 00* 980-983
capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li, + , T-IM Jun 00* 531-534
conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D., + , T-IM Oct 00* 1122-1127
directional antennas calib., errors. *Trzaska, H., T-IM Oct 00* 1112-1116
electronic error reduction syst. for clamp-on probes and measuring current transformers. *Slomovitz, D., T-IM Dec 00* 1278-1281
fast computation of maximum time interval error by binary decomp. *Bregni, S., + , T-IM Dec 00* 1240-1244
gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076
GSM equipt. testing, time-freq. representations. *Angrisani, L., + , T-IM Oct 00* 1050-1056
instrum. meas. errors, uncertainty handling, fuzzy/possibility approach. *Mauris, G., + , T-IM Feb 00* 89-93
intelligent strategy for improving meas. precision of FOG. *Zhu, R., + , T-IM Dec 00* 1183-1188
liq. level microwave gaging, permitt. meas. *Weiss, M., + , T-IM Jun 00* 488-492
microspectrometer design, digital correction, rational filters. *Wisniewski, M.P., + , T-IM Feb 00* 43-48
microstrip patch sens. for permittivity meas. *Bogosanovich, M., T-IM Oct 00* 1144-1148
microwave online meas. of source/device refl. coeffs. *Madonna, G., + , T-IM Apr 00* 285-289
nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., + , T-IM Jun 00* 653-658
opt. shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C., T-IM Aug 00* 795-801
RF MSK data commun. devices testing. *Bucci, G., + , T-IM Oct 00* 1009-1017
time-domain NWA, thru-reflect-line calib., error minim. *Ferrari, P., + , T-IM Feb 00* 178-187
Measurement standards
DC resist. scale at IEN, 100 kΩ to 1 TΩ. *Galliana, F., + , T-IM Oct 00* 959-963
four terminal-pair capacitance & dissipation factor charactn. *Koffman, A.D., + , T-IM Apr 00* 346-348
four terminal-pair capacitors, freq. charact. prediction, sensitivity. *Avramov-Zamurovic, S., + , T-IM Apr 00* 398-404
intelligent strategy for improving meas. precision of FOG. *Handel, P., T-IM Dec 00* 1189-1193
stability eval. of high-precision multifunction instruments for traceability transfer. *Cassiago, C., + , T-IM Dec 00* 1206-1210
tunable vacuum-gap cryogenic coaxial capacitor. *Overney, F., + , T-IM Dec 00* 1326-1330
Measurement standards; cf. Frequency standards; Transfer standards
Measurement systems
instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G., + , T-IM Feb 00* 100-107
instrum. meas. errors, uncertainty handling, fuzzy/possibility approach. *Mauris, G., + , T-IM Feb 00* 89-93
meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen, + , T-IM Feb 00* 77-82
Web-based distributed virtual educational lab. *Benetazzo, L., + , T-IM Apr 00* 349-356
Measurement theory
sens. miniaturization, thermal noise effect on meas. accuracy. *Platonov, A.A., + , T-IM Oct 00* 1018-1022
Measurement uncertainty
AC voltage meas., LF, accurate methods comparison. *Kampik, M., + , T-IM Apr 00* 429-433
elec. instrum. calib., nonsinusoidal conditions, test waveform selection. *Ferrero, A., + , T-IM Apr 00* 382-387
four terminal-pair capacitance & dissipation factor charactn. *Koffman, A.D., + , T-IM Apr 00* 346-348
fuzzy modeling of meas. data acquired from physical sensors. *Mauris, G., + , T-IM Dec 00* 1201-1205
image-based meas., uncertainty charactn. *De Santo, M., + , T-IM Oct 00* 1101-1107
instrum. meas. errors, uncertainty handling, fuzzy/possibility approach. *Mauris, G., + , T-IM Feb 00* 89-93
liq. level microwave gaging, permitt. meas. *Weiss, M., + , T-IM Jun 00* 488-492
measuring distance between graduation lines on graduated scales using electrical test structure metrology. *Penzes, W.B., + , T-IM Dec 00* 1285-1288
nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., + , T-IM Jun 00* 653-658
precision temp. calib. lab., automation, software reliab. *Bojkovski, J., + , T-IM Jun 00* 596-601
thermal noise effect on meas. accuracy. *Platonov, A.A., + , T-IM Oct 00* 1018-1022
Mechanical contact
multifunctional tactile sens. with selective DP. *Yuji, J., + , T-IM Oct 00* 1091-1094

Mechanical engineering computing; cf. Structural engineering computing
Mechanical properties; cf. Friction
Mechanical strength; cf. Compressive strength
Mechanical testing; cf. Impact testing
Mechanical variables measurement
viscous and coulomb friction, meas. procedure. *Kelly, R., +, T-IM Aug 00* 857-861
Mechanical variables measurement; cf. Acceleration measurement; Energy measurement; Flow measurement; Force measurement; Pressure measurement; Velocity measurement; Vibration measurement
Mechanics; cf. Biomechanics; Kinematics
Medical computing
scoliosis treatment, low-power posture meas./control syst. *Lou, E., +, T-IM Feb 00* 108-113
Medical computing; cf. Medical signal processing
Medical diagnostic computing; cf. Medical image processing
Medical image processing
skin nevoid lesions diagnosis, 3D meas. syst. *Caslellini, P., +, T-IM Oct 00* 924-928
some aspects of pseudo random binary array-based surface charactn. *Spoelder, H.J.W., +, T-IM Dec 00* 1331-1336
Medical signal processing
blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A., +, T-IM Jun 00* 541-545
differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P., +, T-IM Jun 00* 498-502
hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A., +, T-IM Apr 00* 388-391
methacholine detect., time series models of lung sounds. *Broersen, P.M.T., +, T-IM Jun 00* 517-523
some aspects of pseudo random binary array-based surface charactn. *Spoelder, H.J.W., +, T-IM Dec 00* 1331-1336
Medical signal processing; cf. Medical image processing
Medicine; cf. Laser applications in medicine
Membranes
Na potentiometric sens., static/dyn. selectivity. *Attari, M., +, T-IM Aug 00* 732-735
MESFET circuits; cf. MESFET integrated circuits
MESFET integrated circuits
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., +, T-IM Feb 00* 172-177
Metals; cf. Aluminum
Metering; cf. Watthour meters; Wattmeters
Meters; cf. Accelerometers; Electrometers; Flowmeters; Power meters; Reflectometers; Tachometers; Voltmeters; Watthour meters; Wattmeters
Method of moments
data traffic meas., speech/voice-band data class. *Benetazzo, L., +, T-IM Apr 00* 413-417
solids dielec. const. meas., rect. waveguide inserted slab. *Gupta, S., +, T-IM Feb 00* 66-70
Michelson interferometers
automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C., +, T-IM Feb 00* 32-36
fiber opt. differential interferometer, strain meas. *Libo Yuan, +, T-IM Aug 00* 779-782
small amplit. sinusoidal vibr. meas., Michelson interferometry. *Ivaschescu, V., T-IM Jun 00* 643-647
Microassembling; cf. Lead bonding
Microcontrollers
capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li, +, T-IM Jun 00* 531-534
multifiber opt. sens. for temp. meas. *Betta, G., +, T-IM Oct 00* 1004-1008
reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808
Micromechanical devices; cf. Microsensors
Microphones
coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497
Micropositioning
phase-sensitive vision for moving targets posn. meas. *Sandoz, P., +, T-IM Aug 00* 867-872
Microprocessor chips; cf. Digital signal processing chips; Microcontrollers
Microsensors
sens. miniaturization, thermal noise effect on meas. accuracy. *Platonov, A.A., +, T-IM Oct 00* 1018-1022
Microstrip antenna arrays
wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K., +, T-IM Apr 00* 439-448
Microstrip antennas
IC package shielding effectiveness meas., integrated antenna use. *Roy, L., +, T-IM Apr 00* 409-412
patch sens. for permittivity meas. *Bogosanovich, M., T-IM Oct 00* 1144-1148
Microstrip antennas; cf. Microstrip antenna arrays
Microstrip components; cf. Microstrip antennas; Microstrip filters
Microstrip filters
ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M., +, T-IM Feb 00* 114-119
Microwave antennas
horn antenna anal., gain-transfer method anal. *Mayhew-Ridgers, G., +, T-IM Oct 00* 949-958
Microwave devices; cf. Microwave antennas
Microwave imaging
2D objs. microwave imaging, FEA appl. *Rekanos, I.T., +, T-IM Apr 00* 234-239
comments, with author's reply, on "Evanescent microwaves: A novel super-resolution noncontact nondestructive imaging technique for biological applications". *Kumar, A., +, T-IM Dec 00* 1358
tomography, inverse scatt., GA based image reconstr. *Pastorino, M., +, T-IM Jun 00* 573-578
Microwave measurement
CdTe EO sens. for elec. and mag. fields. *Cecelja, F., +, T-IM Jun 00* 483-487
dielec. props. meas., phase-shift ambiguity problem. *Trabelsi, S., +, T-IM Feb 00* 56-60
ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M., +, T-IM Feb 00* 114-119
far-field antenna patt. estim. from near-field data, amplit.-only meas. *Migliore, M.D., +, T-IM Feb 00* 71-76
fiber with open cavity, cond. microwave meas. *Sagnard, F., +, T-IM Oct 00* 942-948
FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L., +, T-IM Aug 00* 710-715
lossy media isotropic meas., MM-resoln. E-field probe, 100 MHz-20 GHz. *Pokovic, K., +, T-IM Aug 00* 873-878
microstrip patch sens. for permittivity meas. *Bogosanovich, M., T-IM Oct 00* 1144-1148
moisture content determ. in cereal grain, microwave/dielec. props. meas. *Nelson, S.O., +, T-IM Jun 00* 470-475
moisture meas. using cylindrical resonating cavity. *Bourdel, E., +, T-IM Oct 00* 1023-1028
wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K., +, T-IM Apr 00* 439-448
Microwave measurement; cf. Microwave reflectometry
Microwave reflectometry
concrete, aggregate conc./compressive strength, microwave near-field refl. *Bois, K.J., +, T-IM Feb 00* 49-55
liq. level microwave gaging, permitt. meas. *Weiss, M., +, T-IM Jun 00* 488-492
multistate reflectometer, two power detectors, device refl. coeff. meas. *Yeo, S.P., +, T-IM Feb 00* 61-65
online meas. of source/device refl. coeffs. *Madonna, G., +, T-IM Apr 00* 285-289
solids dielec. const. meas., rect. waveguide inserted slab. *Gupta, S., +, T-IM Feb 00* 66-70
time-domain NWA, thru-reflect-line calib., error minim. *Ferrari, P., +, T-IM Feb 00* 178-187
Microwave technology; cf. Microwave imaging; Microwave measurement
Minimization
conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D., +, T-IM Oct 00* 1122-1127
opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42
Minimum shift keying
GSM equipt. testing, time-freq. representations. *Angrisani, L., +, T-IM Oct 00* 1050-1056
RF MSK data commun. devices testing. *Bucci, G., +, T-IM Oct 00* 1009-1017
Mixed analog-digital integrated circuits
BIST, test-set embedding, width compression. *Chakrabarty, K., +, T-IM Jun 00* 671-678
IC testing by oscill. test methodology. *Wong, M.W.-T., T-IM Apr 00* 240-245
Mixtures; cf. Liquid mixtures
MMIC; cf. Field effect MMIC
Mobile antennas
wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K., +, T-IM Apr 00* 439-448
Mobile communication
GSM equipt. testing, time-freq. representations. *Angrisani, L., +, T-IM Oct 00* 1050-1056

Mobile communication; cf. Mobile radio

Mobile radio
- time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S., +, T-IM Apr 00* 357-364
- wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K., +, T-IM Apr 00* 439-448

Mobile robots
- chirped-FM US range sens., local meas. validation. *Mauris, G., +, T-IM Aug 00* 835-839
- omnidirectional vision sens., fast tracking, for mobile robots. *Bonarini, A., +, T-IM Jun 00* 509-512
- visual meas. of orientation error for mobile robot. *Lang, S.Y.T., +, T-IM Dec 00* 1344-1357

Modal analysis
- flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., +, T-IM Jun 00* 565-572

Modeling
- core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D., +, T-IM Feb 00* 154-160
- instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G., +, T-IM Feb 00* 100-107
- lin., polynomial models with accurate derivative. *Broersen, P.M.T., T-IM Oct 00* 910-914
- nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., +, T-IM Jun 00* 653-658

Modeling; cf. Semiconductor device models

Modulation; cf. Chirp modulation; Intensity modulation; Minimum shift keying

Modules; cf. Multichip modules

Moisture measurement
- cereal grain, microwave/dielec. props. meas. *Nelson, S.O., +, T-IM Jun 00* 470-475
- cylindrical resonating cavity, microwave meas. *Bourdel, E., +, T-IM Oct 00* 1023-1028
- soil moisture meas. as fn. of depth. *Holdem, J.R., +, T-IM Oct 00* 964-970

Monitoring; cf. Computerized monitoring; Condition monitoring; Patient monitoring

Monolithic integrated circuits; cf. Application specific integrated circuits

MOS analog integrated circuits; cf. CMOS analog integrated circuits

MOS integrated circuits; cf. CMOS integrated circuits

MOS logic circuits; cf. CMOS logic circuits

Motion control
- geom. error compensation of precision motion systs. *Tan, K.K., +, T-IM Oct 00* 984-991

Moving average processes; cf. Autoregressive moving average processes

Multi-access systems; cf. Time division multiple access

Multichip modules
- magneto-dosimeter, MCM based integrated 3D mag. microsyst. *Malcovati, P., +, T-IM Apr 00* 341-345

Multilayer perceptrons
- AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., +, T-IM Aug 00* 813-819
- gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S., +, T-IM Apr 00* 424-428
- intell. press. sens. using neural networks. *Patra, J.C., +, T-IM Aug 00* 829-834

Multimeters; cf. Digital multimeters

Multipath channels
- time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S., +, T-IM Apr 00* 357-364
- wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K., +, T-IM Apr 00* 439-448

Multiplexing
- fiber opt. press. & temp. sens., HiBi fiber, coherence MUX. *Bock, W.J., +, T-IM Apr 00* 392-397
- time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S., +, T-IM Apr 00* 357-364

Multiplying circuits
- arbitrary power law device based on integrators. *Kiranon, R., +, T-IM Dec 00* 1176-1182

Multiplying circuits; cf. Analog multipliers

Multiport networks
- multistate reflectometer, two power detectors, device refl. coeff. meas. *Yeo, S.P., +, T-IM Feb 00* 61-65

Multiport networks; cf. Two-port networks

Multiprocessing systems
- geographic network for rem. test expts. *Arpaia, P., +, T-IM Oct 00* 992-997
- multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G., +, T-IM Aug 00* 884-889

Multiterminal networks; cf. Multiport networks

Multiwave mixing
- self-mixing laser speckle velocimeter for blood flow meas. *Ozdemir, S.K., +, T-IM Oct 00* 1029-1035

N

Natural gas technology
- cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, +, T-IM Feb 00* 120-128

Natural sciences computing; cf. Biology computing

Navigation; cf. Computerized navigation

Neodymium alloys
- FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H., +, T-IM Jun 00* 648-652

Network analysis
- FRF meas., broadband vs. stepped sine methods. *Schoukens, J., +, T-IM Apr 00* 275-278
- phase detector, freq. insensitive, fast response/low ripple. *Vyroubal, D., T-IM Oct 00* 1077-1082
- sync. detectors with improved dyn. reserve. *Martens, O., T-IM Oct 00* 1046-1049

Network analysis; cf. Linear network analysis

Network analyzers
- four terminal-pair capacitance & dissipation factor charactn. *Koffman, A.D., +, T-IM Apr 00* 346-348
- four terminal-pair capacitors, freq. charact. prediction, sensitivity. *Avramov-Zamurovic, S., +, T-IM Apr 00* 398-404
- microwave online meas. of source/device refl. coeffs. *Madonna, G., +, T-IM Apr 00* 285-289
- multistate reflectometer, two power detectors, device refl. coeff. meas. *Yeo, S.P., +, T-IM Feb 00* 61-65
- time-domain NWA, thru-reflect-line calib., error minim. *Ferrari, P., +, T-IM Feb 00* 178-187

Network interfaces
- smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B., +, T-IM Jun 00* 621-627

Network parameters; cf. S-parameters

Networks (circuits); cf. Active networks; Analog circuits; Bridge circuits; Comparators (circuits); Current-mode circuits; Differentiating circuits; Dividing circuits; Equivalent circuits; Filters; Integrating circuits; Multiplying circuits; Oscillators; Phase shifters; Reference circuits

Network synthesis
- biquadratic filter design, voltage-mode universal config. *Jiun-Wei Horng, T-IM Oct 00* 1043-1045
- microgravity isolation, implicit freq. weighting. *Hampton, R.D., +, T-IM Apr 00* 265-269
- smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062
- sync. detectors with improved dyn. reserve. *Martens, O., T-IM Oct 00* 1046-1049

Network synthesis; cf. Circuit CAD

Network topology
- current mode instrumentation amplifier (CMIA) topology. *Azhari, S.J., +, T-IM Dec 00* 1272-1277

Neural nets
- 3D objs. automatic acquisition, portable modular syst. *Borghese, N.A., +, T-IM Oct 00* 1128-1136
- complex nonlinear exponential autoregressive model approach to shape recognition using neural networks. *Xiong, S., +, T-IM Dec 00* 1298-1304
- conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D., +, T-IM Oct 00* 1122-1127
- flue gas flow meas. using neural networks, sens. locations optim. *Kang, H., +, T-IM Apr 00* 228-233
- instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G., +, T-IM Feb 00* 100-107
- multi-axis force sens., dyn. decoupling and compensation. *Ke-Jun Xu, +, T-IM Oct 00* 935-941
- multifiber opt. sens. for temp. meas. *Betta, G., +, T-IM Oct 00* 1004-1008

Neural nets; cf. Feedforward neural nets; Fuzzy neural nets

Noise
- 3D objs. automatic acquisition, portable modular syst. *Borghese, N.A., +, T-IM Oct 00* 1128-1136

Noise; cf. Circuit noise; Electromagnetic interference; Random noise

Noise generators
- meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen, +, T-IM Feb 00* 77-82

Noise measurement; cf. Electric noise measurement

Nondestructive testing
- coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497
- concrete, aggregate conc./compressive strength, microwave near-field refl. *Bois, K.J., +, T-IM Feb 00* 49-55
- data fusion techs., pixel-level. *Gros, X.E., +, T-IM Oct 00* 1083-1090
- offset parab. reflector antennas for free space material meas. *Matlacz, J., +, T-IM Aug 00* 862-866

surface dielec. const. meas., planar applicator. *Bozzi, E.*, + , *T-IM Aug 00* 773-775

Nondestructive testing; cf. Eddy current testing; Flaw detection; Ultrasonic materials testing

Nonelectric sensing devices; cf. Optical sensors

Nonlinear acoustics; cf. Acoustic resonance

Nonlinear control systems

lin., polynomial models with accurate derivative. *Broersen, P.M.T.*, *T-IM Oct 00* 910-914

Nonlinear distortion

av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P.*, + , *T-IM Apr 00* 333-336

lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C.*, + , *T-IM Jun 00* 602-609

lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C.*, + , *T-IM Jun 00* 610-616

Nonlinear distortion; cf. Harmonic distortion

Nonlinear estimation

nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S.*, + , *T-IM Jun 00* 653-658

Nonlinear filters

distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K.*, + , *T-IM Aug 00* 746-753

noise removal from image data, recursive neurofuzzy filters. *Russo, F.*, *T-IM Apr 00* 307-314

Nonlinear filters; cf. Biquadratic filters

Nonlinear optics; cf. Multiwave mixing

Nonlinear systems

capacitive sens. nonlin., elec.-field bending influence. *Li, X.*, + , *T-IM Apr 00* 256-259

harmonic losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L.*, + , *T-IM Apr 00* 315-319

intell. press. sens. using neural networks. *Patra, J.C.*, + , *T-IM Aug 00* 829-834

nonlin. averaging, PSD estim. algms. *Attivissimo, F.*, + , *T-IM Oct 00* 1036-1042

Nonlinear systems; cf. Nonlinear control systems

Nuclear reactor instrumentation; cf. Fusion reactor instrumentation

Numerical analysis; cf. Approximation theory; Curve fitting; Error analysis; Finite element analysis; Function approximation; Interpolation; Iterative methods; Least squares approximations; Method of moments

Nyquist criterion

AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P.*, + , *T-IM Feb 00* 166-171

O

Observability

flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F.*, + , *T-IM Jun 00* 565-572

Observers

instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G.*, + , *T-IM Feb 00* 100-107

Office automation; cf. Intranets

Offset reflector antennas

free space material meas. *Matlacz, J.*, + , *T-IM Aug 00* 862-866

Oil technology

cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin*, + , *T-IM Feb 00* 120-128

Open systems

smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B.*, + , *T-IM Jun 00* 621-627

Operating systems (computers); cf. Report generators

Operational amplifiers

adaptive analog test and diagnosis syst. *Cota, E.F.*, + , *T-IM Apr 00* 223-227

capacitance meas., relax. oscillator limitations. *Yili Liu*, + , *T-IM Oct 00* 980-983

CMOS OTA, CMRR freq. response, integrated amp. design. *Giustolisi, G.*, + , *T-IM Feb 00* 137-143

IC testing by oscill. test methodology. *Wong, M.W.-T.*, *T-IM Apr 00* 240-245

LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P.*, *T-IM Feb 00* 2-4

lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S.*, *T-IM Feb 00* 151-153

logarithmic LED electrometer, low DC current meas. *Acharya, Y.B.*, + , *T-IM Feb 00* 5-9

multiple-stage OTA-C filters, testable design. *Cheng-Chung Hsu*, + , *T-IM Oct 00* 929-934

sync. detectors with improved dyn. reserve. *Martens, O.*, *T-IM Oct 00* 1046-1049

Optical beam splitters

photoelastic fiber opt. press. sens., improved long-term stabil. *Changsen Sun*, + , *T-IM Aug 00* 776-778

Optical communication; cf. Optical fiber communication

Optical constants; cf. Refractive index

Optical control

ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K.*, + , *T-IM Feb 00* 19-24

Optical crosstalk

Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I.*, + , *T-IM Aug 00* 762-765

Optical delay lines

Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I.*, + , *T-IM Aug 00* 762-765

ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K.*, + , *T-IM Feb 00* 19-24

Optical elements; cf. Optical beam splitters; Optical delay lines; Optical fibers; Optical prisms

Optical feedback; cf. Laser feedback

Optical fiber amplifiers

LDA receiving head, opt. fiber preamp., improved SNR. *Tobben, H.*, + , *T-IM Feb 00* 10-13

Optical fiber communication

automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C.*, + , *T-IM Feb 00* 32-36

ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K.*, + , *T-IM Feb 00* 19-24

Optical fiber communication; cf. Optical fiber telemetry

Optical fiber losses

low fiber opt. atten. meas. using double sq.-law detect. *Singh, R.*, + , *T-IM Feb 00* 30-31

Optical fiber polarization

intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J.*, + , *T-IM Apr 00* 405-408

Optical fibers

comparison of wavelength dependent polarization dependent loss meas. in fiber gratings. *Zhu, Y.*, + , *T-IM Dec 00* 1231-1239

Optical fibers; cf. Optical fiber losses; Optical fiber polarization; Optical fiber testing

Optical fiber telemetry

fiber-optic ESPI, automatic phase stepping. *Martini, G.*, + , *T-IM Aug 00* 823-828

Optical fiber testing

low fiber opt. atten. meas. using double sq.-law detect. *Singh, R.*, + , *T-IM Feb 00* 30-31

Optical information processing

dust monitor using integrat. sphere, real-time meas. *Watanabe, K.*, + , *T-IM Jun 00* 679-684

Optical instruments; cf. Light interferometers; Optical sensors

Optical losses

comparison of wavelength dependent polarization dependent loss meas. in fiber gratings. *Zhu, Y.*, + , *T-IM Dec 00* 1231-1239

Faraday effect elec. current sens. design, improved sensitivity. *Yi, B.*, + , *T-IM Apr 00* 418-423

Optical losses; cf. Optical fiber losses

Optical loss measurement

low fiber opt. atten. meas. using double sq.-law detect. *Singh, R.*, + , *T-IM Feb 00* 30-31

Optical modulation; cf. Electro-optical modulation

Optical noise; cf. Optical crosstalk

Optical phase locked loops

ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K.*, + , *T-IM Feb 00* 19-24

Optical planar waveguides

Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I.*, + , *T-IM Aug 00* 762-765

Optical prisms

Faraday effect elec. current sens. design, improved sensitivity. *Yi, B.*, + , *T-IM Apr 00* 418-423

Optical projectors

3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G.*, + , *T-IM Jun 00* 628-636

Optical properties; cf. Optical losses

Optical radar

laser range finder, FMCW-like method. *Journet, B.*, + , *T-IM Aug 00* 840-843

Optical resolving power; cf. Image resolution

Optical sensors

shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C.*, *T-IM Aug 00* 795-801

skin nevoid lesions diagnosis, 3D meas. syst. *Castellini, P.*, + , *T-IM Oct 00* 924-928

- smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42
- smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062

Optical sensors; cf. Fiber optic sensors; Magneto-optical sensors

Optical signal detection
- intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J., + , T-IM Apr 00* 405-408
- LDA receiving head, opt. fiber preamp., improved SNR. *Tobben, H., + , T-IM Feb 00* 10-13
- low fiber opt. atten. meas. using double sq.-law detect. *Singh, R., + , T-IM Feb 00* 30-31

Optical testing; cf. Optical fiber testing

Optical transfer function
- IR image registration and reconstruction, multiple video frames. *Alam, M.S., + , T-IM Oct 00* 915-923
- opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42

Optical variables measurement
- automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C., + , T-IM Feb 00* 32-36
- some aspects of pseudo random binary array-based surface charactn. *Spoelder, H.J.W., + , T-IM Dec 00* 1331-1336

Optical variables measurement; cf. Optical loss measurement

Optical waveguides; cf. Optical fibers; Optical planar waveguides

Optics; cf. Bio-optics; Gradient index optics; Integrated optics

Optimal control
- hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., + , T-IM Aug 00* 852-856
- microgravity isolation, implicit freq. weighting. *Hampton, R.D., + , T-IM Apr 00* 265-269

Optimization
- 2D objs. microwave imaging, FEA appl. *Rekanos, I.T., + , T-IM Apr 00* 234-239
- capacitive sens. nonlin., elec.-field bending influence. *Li, X., + , T-IM Apr 00* 256-259
- CdTe EO sens. for elec. and mag. fields. *Cecelja, F., + , T-IM Jun 00* 483-487
- core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D., + , T-IM Feb 00* 154-160
- flue gas flow meas. using neural networks, sens. locations optim. *Kang, H., + , T-IM Apr 00* 228-233
- omnidirectional vision sens., fast tracking, for mobile robots. *Bonarini, A., + , T-IM Jun 00* 509-512
- optimal noise level in stochastic systs., params. meas. *Ando, B., + , T-IM Oct 00* 1137-1143

Optimization; cf. Genetic algorithms; Gradient methods; Minimization

Optoelectronic devices; cf. Light emitting diodes

Organic compounds
- ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M., + , T-IM Feb 00* 114-119
- hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., + , T-IM Aug 00* 852-856

Organic insulating materials; cf. Paper; Plastics; Rubber

Orientation measurement; cf. Attitude measurement

Oscillations; cf. Circuit oscillations; Fluid oscillations

Oscillators
- gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076

Oscillators; cf. Relaxation oscillators; Voltage-controlled oscillators

Oscilloscopes
- maximum likelihood estimator for jitter noise models. *Vandersteen, G., + , T-IM Dec 00* 1282-1284

Oscilloscopes; cf. Digital storage oscilloscopes

Oxidation
- blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A., + , T-IM Jun 00* 541-545

P

Packaging; cf. Ball grid arrays; Integrated circuit packaging; Multichip modules; Thermal management (packaging)

Paper
- stochastic texture image estimators, spatial anisotropy variability. *Scharcanski, J., + , T-IM Oct 00* 971-979

Paper industry
- stochastic texture image estimators, spatial anisotropy variability. *Scharcanski, J., + , T-IM Oct 00* 971-979

Paramagnetic materials
- nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P., + , T-IM Apr 00* 253-255

Parameter estimation
- algorithmic specification of specialized processor for spectrometric appls. *Ben Slima, M., + , T-IM Dec 00* 1224-1230
- core material, mag. hysteresis model, autom. param. eval., ANN. *Grimaldi, D., + , T-IM Feb 00* 154-160
- DFT lin. interpolation method. *Borkowski, J., T-IM Aug 00* 741-745
- hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., + , T-IM Aug 00* 852-856
- in-service meas. syst. for quality anal. of facsimile transmissions. *Bertocco, M., + , T-IM Dec 00* 1267-1271
- knock acoustic sig. estim. using parametric inversion. *Boubal, O., + , T-IM Aug 00* 890-895
- nonlin. averaging, PSD estim. algms. *Attivissimo, F., + , T-IM Oct 00* 1036-1042
- robust broadband periodic excitation design. *Simon, G., + , T-IM Apr 00* 270-274
- spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., + , T-IM Apr 00* 449-454
- stationary stochastic proc., spectral anal., time series models. *Broersen, P.M.T., T-IM Aug 00* 766-772

Parameter estimation; cf. Amplitude estimation; Delay estimation; Direction-of-arrival estimation; Frequency estimation; Maximum likelihood estimation; Phase estimation; Power system parameter estimation

Path planning
- AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., + , T-IM Aug 00* 813-819
- visual meas. of orientation error for mobile robot. *Lang, S.Y.T., + , T-IM Dec 00* 1344-1357

Patient care
- spinal cord injury patients, air cushion press. meas. *Tanimoto, Y., + , T-IM Jun 00* 666-670

Patient diagnosis
- ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S., + , T-IM Oct 00* 998-1003
- differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P., + , T-IM Jun 00* 498-502
- methacholine detect., time series models of lung sounds. *Broersen, P.M.T., + , T-IM Jun 00* 517-523

Patient diagnosis; cf. Biomedical imaging

Patient monitoring
- scoliosis treatment, low-power posture meas./control syst. *Lou, E., + , T-IM Feb 00* 108-113

Patient rehabilitation
- spinal cord injury patients, air cushion press. meas. *Tanimoto, Y., + , T-IM Jun 00* 666-670

Patient treatment
- scoliosis treatment, low-power posture meas./control syst. *Lou, E., + , T-IM Feb 00* 108-113

Patient treatment; cf. Radiation therapy

Pattern classification
- data traffic meas., speech/voice-band data class. *Benetazzo, L., + , T-IM Apr 00* 413-417
- electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F., + , T-IM Aug 00* 809-812

Pattern clustering
- gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S., + , T-IM Apr 00* 424-428

Pattern recognition
- coin tap test, accelerometer and microphone data correl. *Huadong Wu, + , T-IM Jun 00* 493-497
- complex nonlinear exponential autoregressive model approach to shape recognition using neural networks. *Xiong, S., + , T-IM Dec 00* 1298-1304

Pattern recognition; cf. Computer vision; Feature extraction; Image recognition; Pattern classification; Pattern clustering

Peak detectors
- orthogonal peak detector for multiphase sinusoidal sigs. *Wu, K.-D., + , T-IM Dec 00* 1216-1223

Perceptrons; cf. Multilayer perceptrons

Performance evaluation
- VLSI ccts. BIST, space compression. *Das, S.R., + , T-IM Jun 00* 690-705

Performance index
- flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., + , T-IM Jun 00* 565-572

Periodic structures; cf. Log periodic antennas

Peripheral interfaces
- multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G., + , T-IM Aug 00* 884-889
- PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E., + , T-IM Feb 00* 94-99

- **Peripheral interfaces; cf.** Field buses
- **Permittivity**
  - brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A., + , T-IM Jun 00* 591-595
- **Permittivity measurement**
  - 2D objs. microwave imaging, FEA appl. *Rekanos, I.T., + , T-IM Apr 00* 234-239
  - broadband coaxial cavity resonator for complex permittivity meas. of liquids. *Raveendranath, U., + , T-IM Dec 00* 1305-1312
  - ceramics, surface dielec. const. meas., planar applicator. *Bozzi, E., + , T-IM Aug 00* 773-775
  - ethanol glucose mixture, aq., real-time chem. sens., dielec. meas. *McKee, J.M., + , T-IM Feb 00* 114-119
  - liq. level microwave gaging, permitt. meas. *Weiss, M., + , T-IM Jun 00* 488-492
  - marble, surface dielec. const. meas., planar applicator. *Bozzi, E., + , T-IM Aug 00* 773-775
  - microstrip patch sens. for permittivity meas. *Bogosanovich, M., T-IM Oct 00* 1144-1148
  - microwave dielec. props. meas., phase-shift ambiguity problem. *Trabelsi, S., + , T-IM Feb 00* 56-60
  - microwave imaging, inverse scatt., GA based image reconstr. *Pastorino, M., + , T-IM Jun 00* 573-578
  - moisture content determ. in cereal grain, microwave/dielec. props. meas. *Nelson, S.O., + , T-IM Jun 00* 470-475
  - moisture meas. using cylindrical resonating cavity. *Bourdel, E., + , T-IM Oct 00* 1023-1028
  - offset parab. reflector antennas for free space material meas. *Matlacz, J., + , T-IM Aug 00* 862-866
  - plastics, surface dielec. const. meas., planar applicator. *Bozzi, E., + , T-IM Aug 00* 773-775
  - solids dielec. const. meas., rect. waveguide inserted slab. *Gupta, S., + , T-IM Feb 00* 66-70
  - stone, surface dielec. const. meas., planar applicator. *Bozzi, E., + , T-IM Aug 00* 773-775
  - surface dielec. const. meas., planar applicator, capacitive sens. *Bozzi, E., + , T-IM Aug 00* 773-775
- **Perturbation techniques**
  - broadband coaxial cavity resonator for complex permittivity meas. of liquids. *Raveendranath, U., + , T-IM Dec 00* 1305-1312
- **Phase detectors**
  - FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L., + , T-IM Aug 00* 710-715
  - phase detector, freq. insensitive, fast response/low ripple. *Vyroubal, D., T-IM Oct 00* 1077-1082
  - sync. detectors with improved dyn. reserve. *Martens, O., T-IM Oct 00* 1046-1049
- **Phase estimation**
  - multifreq. sig. param., freq.-domain-based least sq. estim. *Carbone, P., + , T-IM Jun 00* 555-558
- **Phase locked loops; cf.** Digital phase locked loops; Optical phase locked loops
- **Phase measurement**
  - appl. of phase meas. algm. to digitizing oscilloscope charactn. *Gori, S., + , T-IM Dec 00* 1211-1215
  - microwave dielec. props. meas., phase-shift ambiguity problem. *Trabelsi, S., + , T-IM Feb 00* 56-60
- **Phase shifters**
  - quadrature phase shifter, freq. insensitive, reactive power meas. *Djokic, B., + , T-IM Feb 00* 161-165
  - reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808
  - reactive power meas. using wavelet transform. *Weon-Ki Yoon, + , T-IM Apr 00* 246-252
- **Phosphors**
  - YVO_4:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P., + , T-IM Feb 00* 129-131
- **Photoelasticity**
  - fiber opt. press. sens., improved long-term stabil. *Changsen Sun, + , T-IM Aug 00* 776-778
- **Photolithography**
  - phase-sensitive vision for moving targets posn. meas. *Sandoz, P., + , T-IM Aug 00* 867-872
- **Photoluminescence**
  - YVO_4:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P., + , T-IM Feb 00* 129-131
- **Photometry; cf.** Spectrophotometry
- **Photon correlation spectroscopy**
  - integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F., + , T-IM Dec 00* 1167-1175
- **Photon counting**
  - integrated active-quenching cct. for single-photon avalanche diodes. *Zappa, F., + , T-IM Dec 00* 1167-1175
- **Physical chemistry; cf.** Electrochemistry
- **Physical instrumentation control**
  - fiber-optic ESPI, automatic phase stepping. *Martini, G., + , T-IM Aug 00* 823-828
  - precision temp. calib. lab., automation, software reliab. *Bojkovski, J., + , T-IM Jun 00* 596-601
- **Physics computing; cf.** High energy physics instrumentation computing; Spectroscopy computing
- **Physiology; cf.** Sleep
- **Piecewise linear techniques**
  - ADC with piecewise linear characteristic, case study-implementation of smart humidity sensor. *Bucci, G., + , T-IM Dec 00* 1154-1166
- **Piezoelectric devices; cf.** Piezoelectric transducers
- **Piezoelectric transducers**
  - geographic network for rem. test expts. *Arpaia, P., + , T-IM Oct 00* 992-997
- **Piezoresistive devices**
  - resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., + , T-IM Jun 00* 585-590
- **Planar waveguides; cf.** Optical planar waveguides
- **Planning (artificial intelligence); cf.** Path planning
- **Plasma confinement; cf.** Plasma toroidal confinement
- **Plasma diagnostics; cf.** Plasma probes
- **Plasma probes**
  - EM transducers in thermonuclear fusion expt. RFX. *Fiorentin, P., + , T-IM Apr 00* 290-293
- **Plasma toroidal confinement**
  - EM transducers in thermonuclear fusion expt. RFX. *Fiorentin, P., + , T-IM Apr 00* 290-293
- **Plastics**
  - surface dielec. const. meas., planar applicator. *Bozzi, E., + , T-IM Aug 00* 773-775
- **Pneumodynamics**
  - differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P., + , T-IM Jun 00* 498-502
  - methacholine detect., time series models of lung sounds. *Broersen, P.M.T., + , T-IM Jun 00* 517-523
- **p-n junctions**
  - calib.-free temp. meas., p-n jn. i-u charact. model. *Kanoun, O., T-IM Aug 00* 901-904
- **Pockels effect**
  - CdTe EO sens. for elec. and mag. fields. *Cecelja, F., + , T-IM Jun 00* 483-487
- **Polarimetry**
  - CdTe EO sens. for elec. and mag. fields. *Cecelja, F., + , T-IM Jun 00* 483-487
- **Polarization; cf.** Electromagnetic wave polarization
- **Poles and zeros**
  - CMOS OTA, CMRR freq. response, integrated amp. design. *Giustolisi, G., + , T-IM Feb 00* 137-143
- **Pollution control; cf.** Air pollution control
- **Pollution measurement; cf.** Air pollution measurement
- **Polymer films**
  - charactn. of material vs. temp. using P(VDF-TrFE) SAW transducers. *Benech, P., + , T-IM Dec 00* 1264-1266
- **Polymers; cf.** Polymer films
- **Polynomial approximation**
  - calib.-free temp. meas., p-n jn. i-u charact. model. *Kanoun, O., T-IM Aug 00* 901-904
  - lin., polynomial models with accurate derivative. *Broersen, P.M.T., T-IM Oct 00* 910-914
- **Polynomials; cf.** Polynomial approximation; Splines (mathematics)
- **Portable instruments**
  - antiquities/art corros. monitoring, electrochem. imped. spectrosc. *Carullo, A., + , T-IM Apr 00* 371-375
  - magneto-dosimeter, MCM based integrated 3D mag. microsyst. *Malcovati, P., + , T-IM Apr 00* 341-345
  - scoliosis treatment, low-power posture meas./control syst. *Lou, E., + , T-IM Feb 00* 108-113
- **Position control**
  - AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., + , T-IM Aug 00* 813-819
  - geom. error compensation of precision motion systs. *Tan, K.K., + , T-IM Oct 00* 984-991
  - phase-sensitive vision for moving targets posn. meas. *Sandoz, P., + , T-IM Aug 00* 867-872
- **Position control; cf.** Micropositioning
- **Position measurement**
  - capacitive ang. posn. sens., virtual rotor grounding. *Brasseur, G., + , T-IM Oct 00* 1108-1111
  - phase-sensitive vision for moving targets posn. meas. *Sandoz, P., + , T-IM Aug 00* 867-872
  - visual meas. of orientation error for mobile robot. *Lang, S.Y.T., + , T-IM Dec 00* 1344-1357

+ Check author entry for coauthors

Possibility theory
fuzzy modeling of meas. data acquired from physical sensors. *Mauris, G., +, T-IM Dec 00* 1201-1205
instrum. meas. errors, uncertainty handling, fuzzy/possibility approach. *Mauris, G., +, T-IM Feb 00* 89-93
Potential transformers
HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C., +, T-IM Jun 00* 550-554
Potentiometers
measuring distance between graduation lines on graduated scales using electrical test structure metrology. *Penzes, W.B., +, T-IM Dec 00* 1285-1288
Powders
YVO$_4$:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P., +, T-IM Feb 00* 129-131
Power converters; cf. AC-DC power converters
Power engineering; cf. Power engineering computing
Power engineering computing
Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young, +, T-IM Jun 00* 579-584
Power measurement
adaptive window fn. method for power meas. *Zhang, J.Q., +, T-IM Dec 00* 1194-1200
av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P., +, T-IM Apr 00* 333-336
current-to-voltage converter, amp.-aided two-stage CT. *Zinkernagel, J., T-IM Feb 00* 144-150
MR power sens. for tissue meas. *Vountesmeri, V., +, T-IM Jun 00* 513-516
quadrature phase shifter, freq. insensitive, reactive power meas. *Djokic, B., +, T-IM Feb 00* 161-165
reactive power meas. using wavelet transform. *Weon-Ki Yoon, +, T-IM Apr 00* 246-252
Power meters
energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808
Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young, +, T-IM Jun 00* 579-584
power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P., +, T-IM Aug 00* 790-794
Power supplies to apparatus
biopotential meas., power line interf., model. *Chimene, M.F., +, T-IM Jun 00* 535-540
HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C., +, T-IM Jun 00* 550-554
Power supply circuits; cf. Constant current sources; Switched mode power supplies
Power supply quality
Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young, +, T-IM Jun 00* 579-584
quality mgt. problems for elec. as processed material. *Sasdelli, R., +, T-IM Apr 00* 460-467
Power system harmonics
av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P., +, T-IM Apr 00* 333-336
harmonic losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L., +, T-IM Apr 00* 315-319
Power system identification; cf. Power system parameter estimation
Power system measurement
AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P., +, T-IM Feb 00* 166-171
distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K., +, T-IM Aug 00* 746-753
Faraday effect elec. current sens. design, improved sensitivity. *Yi, B., +, T-IM Apr 00* 418-423
HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C., +, T-IM Jun 00* 550-554
Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young, +, T-IM Jun 00* 579-584
multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G., +, T-IM Aug 00* 884-889
Power system parameter estimation
av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P., +, T-IM Apr 00* 333-336
Power systems; cf. Power system harmonics; Power system measurement
Power transformers; cf. Power transformer testing
Power transformer testing
harmonic losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L., +, T-IM Apr 00* 315-319
Preamplifiers
high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C., +, T-IM Apr 00* 365-370
meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen, +, T-IM Feb 00* 77-82
Pressure measurement
spinal cord injury patients, air cushion press. meas. *Tanimoto, Y., +, T-IM Jun 00* 666-670
Pressure measurement; cf. Blood pressure measurement
Pressure sensors
fiber opt. press. & temp. sens., HiBi fiber, coherence MUX. *Bock, W.J., +, T-IM Apr 00* 392-397
intell. press. sens. using neural networks. *Patra, J.C., +, T-IM Aug 00* 829-834
multifunctional tactile sens. with selective DP. *Yuji, J., +, T-IM Oct 00* 1091-1094
photoelastic fiber opt. press. sens., improved long-term stabil. *Changsen Sun, +, T-IM Aug 00* 776-778
resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., +, T-IM Jun 00* 585-590
Pressure transducers
high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C., +, T-IM Apr 00* 365-370
Principal component analysis
electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F., +, T-IM Aug 00* 809-812
Probability
concrete, aggregate conc./compressive strength, microwave near-field refl. *Bois, K.J., +, T-IM Feb 00* 49-55
dithered quantizers, stochastic & deterministic, perform. *Carbone, P., +, T-IM Apr 00* 337-340
multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C., +, T-IM Jun 00* 637-642
optimal noise level in stochastic systs., params. meas. *Ando, B., +, T-IM Oct 00* 1137-1143
opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42
VLSI ccts. BIST, space compression. *Das, S.R., +, T-IM Jun 00* 690-705
Probability; cf. Gaussian distribution; Wigner distribution
Probes; cf. Plasma probes
Processor scheduling
multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G., +, T-IM Aug 00* 884-889
Programmable logic arrays; cf. Field programmable gate arrays
Programming languages; cf. Report generators
Protective coatings; cf. Corrosion protective coatings
Pulse circuits; cf. Counting circuits; Driver circuits; Pulse generators; Pulse shaping circuits
Pulse compression; cf. Chirp modulation
Pulse generators
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., +, T-IM Feb 00* 172-177
multidimensional random pulses generation for radioactivity meas. *Kot-Nawrocki, E.P., +, T-IM Aug 00* 754-761
Pulse modulation; cf. Pulse time modulation
Pulse shaping circuits
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., +, T-IM Feb 00* 172-177
Pulse time modulation
lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S., T-IM Feb 00* 151-153

Q

Quality control; cf. Quality management; Taguchi methods
Quality management
quality mgt. problems for elec. as processed material. *Sasdelli, R., +, T-IM Apr 00* 460-467
Quantization noise; cf. Roundoff errors
Quantization (signal)
ADC, noise power ratio testing, mid-riser formulation. *Irons, F.H., +, T-IM Jun 00* 659-665
arbitrary waveform generators, periodic Σ-Δ modulated streams. *Dufort, B., +, T-IM Feb 00* 188-199
calib. of imperfect quantizers. *Handel, P., +, T-IM Oct 00* 1063-1068
dithered quantizers, stochastic & deterministic, perform. *Carbone, P., +, T-IM Apr 00* 337-340
microspectrometer design, digital correction, rational filters. *Wisniewski, M.P., +, T-IM Feb 00* 43-48
noisy digitizer, overall conversion error, noise model. *Bertocco, M., +, T-IM Feb 00* 83-86
opt. shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C., T-IM Aug 00* 795-801
Quantum Hall effect
coaxial resistors for precision meas., QHR transfer stds. *Elmquist, R.E., T-IM Apr 00* 210-215

- why nanovoltmeter offset currents do not explain measured deviations in quantized Hall resistance. *Inglis, D.*, + , *T-IM Dec 00* 1358-1359

Quantum optics; cf. Photon counting

R

Radar; cf. CW radar; Optical radar; Radar applications; Radar signal processing

Radar applications
- FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L.*, + , *T-IM Aug 00* 710-715
- liq. level microwave gaging, permitt. meas. *Weiss, M.*, + , *T-IM Jun 00* 488-492

Radar applications; cf. Radar detection

Radar clutter
- liq. level microwave gaging, permitt. meas. *Weiss, M.*, + , *T-IM Jun 00* 488-492

Radar detection
- FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L.*, + , *T-IM Aug 00* 710-715

Radar interference; cf. Radar clutter

Radar signal processing
- FM envelope delay FSCW radar for multiple-target appl. *Maskell, D.L.*, + , *T-IM Aug 00* 710-715

Radial basis function networks
- intelligent strategy for improving meas. precision of FOG. *Zhu, R.*, + , *T-IM Dec 00* 1183-1188
- rly. track profile meas., composite real-time image proc. *Alippi, C.*, + , *T-IM Jun 00* 559-564

Radiation detection; cf. Coincidence techniques; Radioactivity measurement

Radiation therapy
- tumor therapeutic US heating, FEA simul. *Jarosz, B.J.*, *T-IM Apr 00* 260-264

Radiative lifetimes
- YVO_4:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P.*, + , *T-IM Feb 00* 129-131

Radioactivity measurement
- multidimensional random pulses generation for radioactivity meas. *Kot-Nawrocki, E.P.*, + , *T-IM Aug 00* 754-761

Radio applications
- soil moisture meas. as fn. of depth. *Holdem, J.R.*, + , *T-IM Oct 00* 964-970

Radioastronomical techniques
- ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K.*, + , *T-IM Feb 00* 19-24

Radiocommunication; cf. Mobile radio; Radio data systems

Radio data systems
- RF MSK data commun. devices testing. *Bucci, G.*, + , *T-IM Oct 00* 1009-1017

Radio equipment; cf. Radio transmitters

Radiofrequency heating
- MR power sens. for tissue meas. *Vountesmeri, V.*, + , *T-IM Jun 00* 513-516

Radiofrequency interference
- automatic test equipment for meas. of symmetrical and asymmetrical RE interference based on hybrid jns. *De Bonitatibus, A.*, + , *T-IM Dec 00* 1337-1343

Radiofrequency interference; cf. Atmospherics; White noise

Radiography; cf. Diagnostic radiography

Radio receivers; cf. Transponders

Radio transmitters
- RF MSK data commun. devices testing. *Bucci, G.*, + , *T-IM Oct 00* 1009-1017

Radio transmitters; cf. Transponders

Radiowave interferometers
- broadband radio interferometer, seq. trigger, lightning emitted sources. *Mardiana, R.*, + , *T-IM Apr 00* 376-381

Radiowave interferometry
- lightning emitted sources, broadband radio interferometry. *Mardiana, R.*, + , *T-IM Apr 00* 376-381
- ultrastable fiber opt. freq. distrib. syst., opt. delay control module. *Sato, K.*, + , *T-IM Feb 00* 19-24

Radiowave propagation
- time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S.*, + , *T-IM Apr 00* 357-364
- wideband radio channel, 3D spatial-temporal dual-polarized meas. *Kalliola, K.*, + , *T-IM Apr 00* 439-448

Radiowave propagation; cf. Atmospheric electromagnetic wave propagation

Railways
- track profile meas., composite real-time image proc. *Alippi, C.*, + , *T-IM Jun 00* 559-564
- traction rails at 50 Hz, internal impedance mes. *Mariscotti, A.*, + , *T-IM Apr 00* 294-299

Randomized algorithms; cf. Genetic algorithms

Random noise
- nonlin. averaging, PSD estim. algms. *Attivissimo, F.*, + , *T-IM Oct 00* 1036-1042
- optimal noise level in stochastic systs., params. meas. *Ando, B.*, + , *T-IM Oct 00* 1137-1143
- RF MSK data commun. devices testing. *Bucci, G.*, + , *T-IM Oct 00* 1009-1017

Random noise; cf. Gaussian noise; Thermal noise; White noise

Random noises
- intelligent strategy for improving meas. precision of FOG. *Zhu, R.*, + , *T-IM Dec 00* 1183-1188

Random number generation
- stochastic watthour meter, high-precision, accuracy limit. *Pejic, D.*, + , *T-IM Jun 00* 617-620

Random processes
- FRF meas., broadband vs. stepped sine methods. *Schoukens, J.*, + , *T-IM Apr 00* 275-278
- mixed-mode BIST, test-set embedding, width compression. *Chakrabarty, K.*, + , *T-IM Jun 00* 671-678
- multidimensional random pulses generation for radioactivity meas. *Kot-Nawrocki, E.P.*, + , *T-IM Aug 00* 754-761

Rare earth alloys; cf. Neodymium alloys

Rare earth metals; cf. Erbium; Europium

Rational functions
- microspectrometer design, digital correction, rational filters. *Wisniewski, M.P.*, + , *T-IM Feb 00* 43-48

Rayleigh waves
- charactn. of material vs. temp. using P(VDF-TrFE) SAW transducers. *Benech, P.*, + , *T-IM Dec 00* 1264-1266

Reactive power
- meas. using wavelet transform. *Weon-Ki Yoon*, + , *T-IM Apr 00* 246-252
- quadrature phase shifter, freq. insensitive, reactive power meas. *Djokic, B.*, + , *T-IM Feb 00* 161-165
- reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V.*, *T-IM Aug 00* 802-808

Reactors (electric); cf. Capacitors

Readout electronics; cf. Digital readout

Real-time systems
- 3D objs. automatic acquisition, portable modular syst. *Borghese, N.A.*, + , *T-IM Oct 00* 1128-1136
- distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K.*, + , *T-IM Aug 00* 746-753
- gated single-particle counting syst., errors anal. *Zielinski, M.*, *T-IM Oct 00* 1069-1076
- IR image registration and reconstruction, multiple video frames. *Alam, M.S.*, + , *T-IM Oct 00* 915-923
- sens. sig. params. estim., DSP approach. *Bertocco, M.*, + , *T-IM Jun 00* 685-689

Real-time systems; cf. Embedded systems

Receiving antennas
- broadband radio interferometer, seq. trigger, lightning emitted sources. *Mardiana, R.*, + , *T-IM Apr 00* 376-381

Recorders; cf. Data loggers

Recording; cf. Video recording

Rectangular waveguides
- solids dielec. const. meas., rect. waveguide inserted slab. *Gupta, S.*, + , *T-IM Feb 00* 66-70

Recursive filters
- noise removal from image data, recursive neurofuzzy filters. *Russo, F.*, *T-IM Apr 00* 307-314

Redundancy
- instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G.*, + , *T-IM Feb 00* 100-107

Reference circuits
- power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P.*, + , *T-IM Aug 00* 790-794

Reflectometers
- multistate reflectometer, two power detectors, device refl. coeff. meas. *Yeo, S.P.*, + , *T-IM Feb 00* 61-65

Reflectometry; cf. Microwave reflectometry; Time-domain reflectometry

Reflector antennas; cf. Offset reflector antennas

Refractive index
- multifiber opt. sens. for temp. meas. *Betta, G.*, + , *T-IM Oct 00* 1004-1008
- temp. sens., intrinsic, ref. liq. refr. index based. *Betta, G.*, + , *T-IM Feb 00* 25-29

Regulation; cf. Load regulation

Relaxation oscillators
- capacitance meas., relax. oscillator limitations. *Yili Liu*, + , *T-IM Oct 00* 980-983
- capacitive sens. interface, shunting cond. effects elimination. *Xiujun Li*, + , *T-IM Jun 00* 531-534

  - lin. resist.-to-time converter, bridge amp./integrator/comparator. *Kaliyugavaradan, S., T-IM Feb 00* 151-153
  - resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., + , T-IM Jun 00* 585-590
- **Reliability; cf.** Fault tolerance; Software reliability
- **Report generators**
  - PC-based autom. calib. of meas. instrum., computer vision use. *Corra Alegria, E., + , T-IM Feb 00* 94-99
- **Resistance furnaces**
  - LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., + , T-IM Jun 00* 546-549
- **Resistance heating**
  - LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C., + , T-IM Jun 00* 546-549
- **Resistors**
  - coaxial resistors for precision meas., QHR transfer stds. *Elmquist, R.E., T-IM Apr 00* 210-215
  - DC resist. scale at IEN, 100 kΩ to 1 TΩ. *Galliana, F., + , T-IM Oct 00* 959-963
  - self-balancing lin. bridge ccts. with resistive minors for resistance meas. *Tadic, N., + , T-IM Dec 00* 1318-1325
- **Resonance**
  - optimal noise level in stochastic systs., params. meas. *Ando, B., + , T-IM Oct 00* 1137-1143
- **Resonance; cf.** Acoustic resonance
- **Resonators; cf.** Cavity resonators
- **Reverse engineering**
  - 3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G., + , T-IM Jun 00* 628-636
- **Reviews**
  - instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G., + , T-IM Feb 00* 100-107
- **Ring lasers**
  - Er^{3+}-doped fiber ring laser opt. delay line. *Kobayashi, I., + , T-IM Aug 00* 762-765
- **Road vehicles; cf.** Automobiles
- **Robots; cf.** Industrial robots; Mobile robots; Robot vision
- **Robot vision**
  - AGV trajectory recogn. opt. sens., robot motion planning. *Borges, G.A., + , T-IM Aug 00* 813-819
  - chirped-FM US range sens., local meas. validation. *Mauris, G., + , T-IM Aug 00* 835-839
  - omnidirectional vision sens., fast tracking, for mobile robots. *Bonarini, A., + , T-IM Jun 00* 509-512
  - visual meas. of orientation error for mobile robot. *Lang, S.Y.T., + , T-IM Dec 00* 1344-1357
- **Robust control**
  - broadband periodic excitation design. *Simon, G., +, T-IM Apr 00* 270-274
  - flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., + , T-IM Jun 00* 565-572
- **Rocks**
  - ceramics, surface dielec. const. meas., planar applicator. *Bozzi, E., + , T-IM Aug 00* 773-775
  - plastics, surface dielec. const. meas., planar applicator. *Bozzi, E., + , T-IM Aug 00* 773-775
- **Rotational flow; cf.** Vortices
- **Roundoff errors**
  - adaptive window fn. method for power meas. *Zhang, J.Q., + , T-IM Dec 00* 1194-1200
  - flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., + , T-IM Jun 00* 565-572
  - intelligent strategy for improving meas. precision of FOG. *Handel, P., T-IM Dec 00* 1189-1193
- **Rubber**
  - multifunctional tactile sens. with selective DP. *Yuji, J., + , T-IM Oct 00* 1091-1094

S

- **Sample and hold circuits**
  - arbitrary power law device based on integrators. *Kiranon, R., + , T-IM Dec 00* 1176-1182
  - phase detector, freq. insensitive, fast response/low ripple. *Vyroubal, D., T-IM Oct 00* 1077-1082
- **Sampled data circuits; cf.** Sampled data filters
- **Sampled data filters**
  - spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., + , T-IM Apr 00* 449-454
- **Sampling methods**
  - adaptive window fn. method for power meas. *Zhang, J.Q., + , T-IM Dec 00* 1194-1200
- **Sampling methods; cf.** Signal sampling
- **Scattering; cf.** Electromagnetic wave scattering
- **Scheduling; cf.** Processor scheduling
- **Schottky gate field effect transistors**
  - GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H., + , T-IM Feb 00* 172-177
- **Security; cf.** Alarm systems
- **Self-organising feature maps**
  - gas sens. sig. proc., fuzzy self-organizing hybrid neural network. *Osowski, S., + , T-IM Apr 00* 424-428
- **Semiconductor device models**
  - calib.-free temp. meas., p-n jn. i-u charact. model. *Kanoun, O., T-IM Aug 00* 901-904
- **Semiconductor devices; cf.** Piezoresistive devices; Semiconductor lasers
- **Semiconductor diodes; cf.** Avalanche diodes; Light emitting diodes
- **Semiconductor junctions; cf.** p-n junctions
- **Semiconductor lasers**
  - automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C., + , T-IM Feb 00* 32-36
  - LD driver cct., 5-decade exponentially-controlled current source. *Rudd, E.P., T-IM Feb 00* 2-4
  - self-mixing laser speckle velocimeter for blood flow meas. *Ozdemir, S.K., + , T-IM Oct 00* 1029-1035
- **Semiconductor materials**
  - CdZnTe based sensor for X-ray imaging appls. *Giakos, G.C., + , T-IM Apr 00* 300-306
- **Semiconductor materials; cf.** III-V semiconductors; II-VI semiconductors
- **Semiconductor switches; cf.** Field effect transistor switches
- **Sensitivity analysis**
  - four terminal-pair capacitors, freq. charact. prediction, sensitivity. *Avramov-Zamurovic, S., + , T-IM Apr 00* 398-404
- **Sensor fusion**
  - coin tap test, accelerometer and microphone data correl. *Huadong Wu, + , T-IM Jun 00* 493-497
  - flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., + , T-IM Jun 00* 565-572
  - instrum. fault detect. & isolation, state-of-the-art, res. trends. *Betta, G., + , T-IM Feb 00* 100-107
  - multifunctional tactile sens. with selective DP. *Yuji, J., + , T-IM Oct 00* 1091-1094
  - NDT data fusion techs., pixel-level. *Gros, X.E., + , T-IM Oct 00* 1083-1090
- **Sensors**
  - fuzzy modeling of meas. data acquired from physical sensors. *Mauris, G., + , T-IM Dec 00* 1201-1205
- **Sensors; cf.** Chemical sensors; Electric sensing devices; Force sensors; Humidity sensors; Image sensors; Infrared detectors; Intelligent sensors; Magnetic sensors; Microsensors; Pressure sensors; Strain sensors; Surface acoustic wave sensors; Tactile sensors; Temperature sensors
- **Sequences**
  - dithered quantizers, stochastic & deterministic, perform. *Carbone, P., + , T-IM Apr 00* 337-340
- **Set theory; cf.** Fuzzy set theory
- **Shape measurement**
  - 3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G., + , T-IM Jun 00* 628-636
  - skin nevoid lesions diagnosis, 3D meas. syst. *Caslellini, P., + , T-IM Oct 00* 924-928
- **Shape recognition; cf.** Pattern recognition
- **Shielding; cf.** Electromagnetic shielding
- **Sigma-delta modulation**
  - arbitrary waveform generators, periodic Σ-Δ modulated streams. *Dufort, B., + , T-IM Feb 00* 188-199
  - magneto-dosimeter, MCM based integrated 3D mag. microsyst. *Malcovati, P., + , T-IM Apr 00* 341-345
- **Signal classification**
  - data traffic meas., speech/voice-band data class. *Benetazzo, L., + , T-IM Apr 00* 413-417
- **Signal detection; cf.** Acoustic signal detection; Differential detection; Optical signal detection; Radar detection
- **Signal generators; cf.** Noise generators
- **Signal processing**
  - capacitance meas., relax. oscillator limitations. *Yili Liu, + , T-IM Oct 00* 980-983
  - DFT lin. interpolation method. *Borkowski, J., T-IM Aug 00* 741-745
  - distorted sigs. freq. meas., extended complex Kalman filter. *Dash, P.K., + , T-IM Aug 00* 746-753
  - GSM equipt. testing, time-freq. representations. *Angrisani, L., + , T-IM Oct 00* 1050-1056
  - in-service meas. syst. for quality anal. of facsimile transmissions. *Bertocco, M., + , T-IM Dec 00* 1267-1271

intell. press. sens. using neural networks. *Patra, J.C., +, T-IM Aug 00* 829-834
lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., +, T-IM Jun 00* 602-609
lin. syst. ident., nonlin. distortions & multisine sigs. *Evans, C., +, T-IM Jun 00* 610-616
optimal noise level in stochastic systs., params. meas. *Ando, B., +, T-IM Oct 00* 1137-1143
reactive power meas. using wavelet transform. *Weon-Ki Yoon, +, T-IM Apr 00* 246-252
robust broadband periodic excitation design. *Simon, G., +, T-IM Apr 00* 270-274
sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J., +, T-IM Jun 00* 503-508
smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062

Signal processing; cf. Acoustic signal processing; Adaptive signal processing; Array signal processing; Convolution; Data compression; Deconvolution; Digital signal processing chips; Image processing; Medical signal processing; Optical information processing; Radar signal processing; Sensor fusion; Signal classification; Signal reconstruction; Signal resolution; Signal sampling; Speech processing

Signal processing equipment
cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin, +, T-IM Feb 00* 120-128
conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D., +, T-IM Oct 00* 1122-1127
dust monitor using integrat. sphere, real-time meas. *Watanabe, K., +, T-IM Jun 00* 679-684
HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C., +, T-IM Jun 00* 550-554
optimal noise level in stochastic systs., params. meas. *Ando, B., +, T-IM Oct 00* 1137-1143
phase detector, freq. insensitive, fast response/low ripple. *Vyroubal, D., T-IM Oct 00* 1077-1082
resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V., +, T-IM Jun 00* 585-590
sens. sig. params. estim., DSP approach. *Bertocco, M., +, T-IM Jun 00* 685-689

Signal reconstruction
algorithmic specification of specialized processor for spectrometric appls. *Ben Slima, M., +, T-IM Dec 00* 1224-1230
error measures for resampled irregular data. *de Waele, S., +, T-IM Apr 00* 216-222
microspectrometer design, digital correction, rational filters. *Wisniewski, M.P., +, T-IM Feb 00* 43-48

Signal reconstruction; cf. Image reconstruction

Signal resolution
dithered quantizers, stochastic & deterministic, perform. *Carbone, P., +, T-IM Apr 00* 337-340

Signal resolution; cf. Image resolution

Signal restoration; cf. Image restoration

Signal sampling
AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P., +, T-IM Feb 00* 166-171
AC voltage meas., LF, accurate methods comparison. *Kampik, M., +, T-IM Apr 00* 429-433
av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P., +, T-IM Apr 00* 333-336
dithered quantizers, stochastic & deterministic, perform. *Carbone, P., +, T-IM Apr 00* 337-340
error measures for resampled irregular data. *de Waele, S., +, T-IM Apr 00* 216-222
hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A., +, T-IM Apr 00* 388-391
maximum likelihood estimator for jitter noise models. *Vandersteen, G., +, T-IM Dec 00* 1282-1284
measuring slowly changing AC sigs. without sample-and-hold cct. *Petrovic, P., +, T-IM Dec 00* 1245-1248
multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G., +, T-IM Aug 00* 884-889
multifreq. sig. param., freq.-domain-based least sq. estim. *Carbone, P., +, T-IM Jun 00* 555-558
noisy digitizer, overall conversion error, noise model. *Bertocco, M., +, T-IM Feb 00* 83-86
opt. shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C., T-IM Aug 00* 795-801
reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808

Silicon alloys
FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H., +, T-IM Jun 00* 648-652

Simulation; cf. Digital simulation; Fault simulation

Size measurement
nonlin. bounded-error estim., model selection, worst-case criterion. *Brahim-Belhouari, S., +, T-IM Jun 00* 653-658

Skin
nevoid lesions diagnosis, 3D meas. syst. *Castellini, P., +, T-IM Oct 00* 924-928

Skin effect
coaxial resistors for precision meas., QHR transfer stds. *Elmquist, R.E., T-IM Apr 00* 210-215

Sleep
differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P., +, T-IM Jun 00* 498-502

Smoke
hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., +, T-IM Aug 00* 852-856
opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42
smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062

Smoothing methods
av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P., +, T-IM Apr 00* 333-336

Sodium
Na potentiometric sens., static/dyn. selectivity. *Attari, M., +, T-IM Aug 00* 732-735

Software engineering; cf. Software portability; Software reliability

Software portability
precision temp. calib. lab., automation, software reliab. *Bojkovski, J., +, T-IM Jun 00* 596-601

Software reliability
precision temp. calib. lab., automation, software reliab. *Bojkovski, J., +, T-IM Jun 00* 596-601

Soil
moisture meas. as fn. of depth. *Holdem, J.R., +, T-IM Oct 00* 964-970

Solid lasers; cf. Fiber lasers; Semiconductor lasers

SONET
fast computation of maximum time interval error by binary decomp. *Bregni, S., +, T-IM Dec 00* 1240-1244

Space-time adaptive processing
time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S., +, T-IM Apr 00* 357-364

S-parameters
offset parab. reflector antennas for free space material meas. *Matlacz, J., +, T-IM Aug 00* 862-866

Spatial variables control; cf. Motion control; Position control

Spatial variables measurement; cf. Attitude measurement; Displacement measurement; Distance measurement; Level measurement; Position measurement; Shape measurement; Size measurement; Surface topography measurement; Thickness measurement

Special issues and sections
selected papers IMTC'99 (special issue). *T-IM Apr 00* 210-467
selected papers IMTC'99 (special issue). *T-IM Jun 00* 470-705

Speckle
self-mixing laser speckle velocimeter for blood flow meas. *Ozdemir, S.K., +, T-IM Oct 00* 1029-1035

Speckle; cf. Electronic speckle pattern interferometry

Spectra; cf. Luminescence

Spectral analysis
DFT lin. interpolation method. *Borkowski, J., T-IM Aug 00* 741-745
error measures for resampled irregular data. *de Waele, S., +, T-IM Apr 00* 216-222
FRF meas., broadband vs. stepped sine methods. *Schoukens, J., +, T-IM Apr 00* 275-278
hand movement sig. quality comparison, force adaptation assess. *Breitenbach, A., +, T-IM Apr 00* 388-391
instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A., +, T-IM Aug 00* 783-789
intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J., +, T-IM Apr 00* 405-408
methacholine detect., time series models of lung sounds. *Broersen, P.M.T., +, T-IM Jun 00* 517-523
multi-DSP based instrum., VXI C-size module, real-time meas. *Bucci, G., +, T-IM Aug 00* 884-889
multifreq. sig. param., freq.-domain-based least sq. estim. *Carbone, P., +, T-IM Jun 00* 555-558
nonlin. averaging, PSD estim. algms. *Attivissimo, F., +, T-IM Oct 00* 1036-1042
robust broadband periodic excitation design. *Simon, G., +, T-IM Apr 00* 270-274
sens. sig. params. estim., DSP approach. *Bertocco, M., +, T-IM Jun 00* 685-689

small amplit. sinusoidal vibr. meas., Michelson interferometry. *Ivaschescu, V., T-IM Jun 00* 643-647
stationary stochastic proc., spectral anal., time series models. *Broersen, P.M.T., T-IM Aug 00* 766-772
Spectral analyzers
correl. spectrum analyzer, high sensitivity noise meas. *Sampietro, N., +, T-IM Aug 00* 820-822
Spectral line breadth; cf. Spectral line narrowing
Spectral line narrowing
microwave freq. reference based on VCSEL-driven dark line resonances in Cs vapor. *Kitching, J., +, T-IM Dec 00* 1313-1317
Spectral methods of temperature measurement
YVO$_4$:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P., +, T-IM Feb 00* 129-131
Spectrochemical analysis
blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A., +, T-IM Jun 00* 541-545
multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C., +, T-IM Jun 00* 637-642
spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., +, T-IM Apr 00* 449-454
Spectrometer accessories
algorithmic specification of specialized processor for spectrometric appls. *Ben Slima, M., +, T-IM Dec 00* 1224-1230
Spectrometers
microspectrometer design, digital correction, rational filters. *Wisniewski, M.P., +, T-IM Feb 00* 43-48
spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., +, T-IM Apr 00* 449-454
Spectrophotometry
multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C., +, T-IM Jun 00* 637-642
Spectroscopy; cf. Photon correlation spectroscopy; Time resolved spectroscopy; Ultraviolet spectroscopy
Spectroscopy computing
blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A., +, T-IM Jun 00* 541-545
microspectrometer design, digital correction, rational filters. *Wisniewski, M.P., +, T-IM Feb 00* 43-48
multicomponent subst. spectrophotometric anal., Bayesian approach. *Niedzinski, C., +, T-IM Jun 00* 637-642
spectrometer calib. using GA, data correction operators, Cauchy filter. *Sprzeczak, P., +, T-IM Apr 00* 449-454
Speech processing
data traffic meas., speech/voice-band data class. *Benetazzo, L., +, T-IM Apr 00* 413-417
SPICE
CMOS OTA, CMRR freq. response, integrated amp. design. *Giustolisi, G., +, T-IM Feb 00* 137-143
Splines (mathematics)
blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A., +, T-IM Jun 00* 541-545
SQUID magnetometers
nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P., +, T-IM Apr 00* 253-255
SQUIDs; cf. SQUID magnetometers
Stability
gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076
sinewave generator synchronized design for AC metrology. *Callegaro, L., +, T-IM Apr 00* 320-324
smoke detector threshold stabil. improvement. *Aleksic, Z.J., T-IM Oct 00* 1057-1062
stability eval. of high-precision multifunction instruments for traceability transfer. *Cassiago, C., +, T-IM Dec 00* 1206-1210
Stability; cf. Frequency stability; Robust control; Thermal stability
Stability criteria; cf. Nyquist criterion
Standardization
smart transducer interface stds., IEEE 1451, distrib. meas. & control. *Lee, K.B., +, T-IM Jun 00* 621-627
Standards
hydrocarbon conc. sens., constrained iter. deconvolution. *Neveux, P., +, T-IM Aug 00* 852-856
Standards; cf. IEEE standards; ISO standards; Measurement standards; Telecommunication standards
State estimation
flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., +, T-IM Jun 00* 565-572
State estimation; cf. Observers
State feedback
flexible manipulator, modal estim., multisens. combination schemes. *Li, Y.F., +, T-IM Jun 00* 565-572
Statistical analysis
ambulatory systolic blood press. modeling for hypertension diagnosis. *Charbonnier, S., +, T-IM Oct 00* 998-1003
four terminal-pair capacitance & dissipation factor charactn. *Koffman, A.D., +, T-IM Apr 00* 346-348
robust broadband periodic excitation design. *Simon, G., +, T-IM Apr 00* 270-274
sens. miniaturization, thermal noise effect on meas. accuracy. *Platonov, A.A., +, T-IM Oct 00* 1018-1022
sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J., +, T-IM Jun 00* 503-508
Statistical analysis; cf. Maximum likelihood estimation; Sampling methods
Statistics; cf. Error statistics; Statistical analysis; Time series
Stochastic processes
dithered quantizers, stochastic & deterministic, perform. *Carbone, P., +, T-IM Apr 00* 337-340
methacholine detect., time series models of lung sounds. *Broersen, P.M.T., +, T-IM Jun 00* 517-523
Stochastic processes; cf. Autoregressive processes
Stochastic systems
optimal noise level in stochastic systs., params. meas. *Ando, B., +, T-IM Oct 00* 1137-1143
texture image estimators, spatial anisotropy variability. *Scharcanski, J., +, T-IM Oct 00* 971-979
VLSI ccts. BIST, space compression. *Das, S.R., +, T-IM Jun 00* 690-705
Strain sensors
fiber opt. differential interferometer, strain meas. *Libo Yuan, +, T-IM Aug 00* 779-782
intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J., +, T-IM Apr 00* 405-408
Strip line filters; cf. Microstrip filters
Structural engineering; cf. Structural engineering computing
Structural engineering computing
coin tap test, accelerometer and microphone data correl. *Huadong Wu, +, T-IM Jun 00* 493-497
Student experiments
geographic network for rem. test expts. *Arpaia, P., +, T-IM Oct 00* 992-997
Substrates
CdZnTe based sensor for X-ray imaging appls. *Giakos, G.C., +, T-IM Apr 00* 300-306
Superconducting devices; cf. Superconducting magnets
Superconducting magnets
kg unit of mass using supercond. MAGLEV. *Shiota, F., +, T-IM Oct 00* 1117-1121
Superluminescent diodes
automated opt. coherence length/delay meas., coherence-modulated transm. *Gutierrez-Martinez, C., +, T-IM Feb 00* 32-36
Surface acoustic wave devices; cf. Surface acoustic wave sensors; Surface acoustic wave signal processing; Surface acoustic wave transducers
Surface acoustic waves
Lamb-wave US NDE sig. anal., wavelet-transform-based method. *Legendre, S., +, T-IM Jun 00* 524-530
Surface acoustic wave sensors
FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H., +, T-IM Jun 00* 648-652
Surface acoustic wave signal processing
Lamb-wave US NDE sig. anal., wavelet-transform-based method. *Legendre, S., +, T-IM Jun 00* 524-530
Surface acoustic wave transducers
charactn. of material vs. temp. using P(VDF-TrFE) SAW transducers. *Benech, P., +, T-IM Dec 00* 1264-1266
Surface emitting lasers
microwave freq. reference based on VCSEL-driven dark line resonances in Cs vapor. *Kitching, J., +, T-IM Dec 00* 1313-1317
Surface phenomena; cf. Surface acoustic waves
Surface texture
skin nevoid lesions diagnosis, 3D meas. syst. *Castellini, P., +, T-IM Oct 00* 924-928
Surface topography measurement
3D imaging sens., struct. light projection, calib. & perform. *Sansoni, G., +, T-IM Jun 00* 628-636
rly. track profile meas., composite real-time image proc. *Alippi, C., +, T-IM Jun 00* 559-564
Swirling flow; cf. Vortices
Switched mode power supplies
power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P., +, T-IM Aug 00* 790-794
Switched networks; cf. Switched mode power supplies
Switches; cf. Thermostats
Synchronization
AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P., +, T-IM Feb 00* 166-171

fast computation of maximum time interval error by binary decomp. *Bregni, S.*, +, *T-IM Dec 00* 1240-1244
fiber-optic ESPI, automatic phase stepping. *Martini, G.*, +, *T-IM Aug 00* 823-828
gated single-particle counting syst., errors anal. *Zielinski, M., T-IM Oct 00* 1069-1076
reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V., T-IM Aug 00* 802-808
sinewave generator synchronized design for AC metrology. *Callegaro, L.*, +, *T-IM Apr 00* 320-324
Synchronous digital hierarchy
fast computation of maximum time interval error by binary decomp. *Bregni, S.*, +, *T-IM Dec 00* 1240-1244

T

Tachometers
opt. shaft encoder charactn., differentiator model, nonlin. *Kavanagh, R.C., T-IM Aug 00* 795-801
Tactile sensors
multifunctional tactile sens. with selective DP. *Yuji, J.*, +, *T-IM Oct 00* 1091-1094
Taguchi methods
electronic nose, air-conditioned syst. gas discrim., smart array. *Sarry, F.*, +, *T-IM Aug 00* 809-812
Target tracking
phase-sensitive vision for moving targets posn. meas. *Sandoz, P.*, +, *T-IM Aug 00* 867-872
Teaching; cf. Student experiments
Telecommunication; cf. Data communication; Digital communication; Mobile communication; Telecommunication computing; Telecommunication standards
Telecommunication channels; cf. Multipath channels
Telecommunication computing
data traffic meas., speech/voice-band data class. *Benetazzo, L.*, +, *T-IM Apr 00* 413-417
Telecommunication equipment; cf. Telecommunication equipment testing
Telecommunication equipment testing
GSM equipt. testing, time-freq. representations. *Angrisani, L.*, +, *T-IM Oct 00* 1050-1056
RF MSK data commun. devices testing. *Bucci, G.*, +, *T-IM Oct 00* 1009-1017
Telecommunication services; cf. Facsimile; Telemetry; Telephony
Telecommunication standards
GSM equipt. testing, time-freq. representations. *Angrisani, L.*, +, *T-IM Oct 00* 1050-1056
Telecommunication standards; cf. SONET
Telecommunication switching; cf. Multiplexing
Telecommunication traffic; cf. Telephone traffic
Telemetry
geographic network for rem. test expts. *Arpaia, P.*, +, *T-IM Oct 00* 992-997
Telemetry; cf. Optical fiber telemetry
Telephone traffic
data traffic meas., speech/voice-band data class. *Benetazzo, L.*, +, *T-IM Apr 00* 413-417
Telephony
in-service meas. syst. for quality anal. of facsimile transmissions. *Bertocco, M.*, +, *T-IM Dec 00* 1267-1271
Telephony; cf. Telephone traffic
Television; cf. Television applications
Television antennas
offset parab. reflector antennas for free space material meas. *Matlacz, J.*, +, *T-IM Aug 00* 862-866
Television applications
multifactorial movement anal. in weightlessness. *Baroni, G.*, +, *T-IM Jun 00* 476-482
Television equipment; cf. Television antennas
Temperature
charactn. of material vs. temp. using P(VDF-TrFE) SAW transducers. *Benech, P.*, +, *T-IM Dec 00* 1264-1266
Temperature; cf. Temperature distribution
Temperature control
LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C.*, +, *T-IM Jun 00* 546-549
precision temp. calib. lab., automation, software reliab. *Bojkovski, J.*, +, *T-IM Jun 00* 596-601
Temperature distribution
tumor therapeutic US heating, FEA simul. *Jarosz, B.J., T-IM Apr 00* 260-264
Temperature measurement
brain phantom, temp.-change distrib. imaging, capacitance meas. *Kimoto, A.*, +, *T-IM Jun 00* 591-595
calib.-free temp. meas., p-n jn. i-u charact. model. *Kanoun, O., T-IM Aug 00* 901-904
conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D.*, +, *T-IM Oct 00* 1122-1127
multifiber opt. sens. for temp. meas. *Betta, G.*, +, *T-IM Oct 00* 1004-1008
nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P.*, +, *T-IM Apr 00* 253-255
precision temp. calib. lab., automation, software reliab. *Bojkovski, J.*, +, *T-IM Jun 00* 596-601
Temperature measurement; cf. Spectral methods of temperature measurement
Temperature sensors
fiber opt. press. & temp. sens., HiBi fiber, coherence MUX. *Bock, W.J.*, +, *T-IM Apr 00* 392-397
intermodal all-fiber sens., polaris.-sensitive, spectral resolved detect. *Bock, W.J.*, +, *T-IM Apr 00* 405-408
multifiber opt. sens. for temp. meas. *Betta, G.*, +, *T-IM Oct 00* 1004-1008
multifunctional tactile sens. with selective DP. *Yuji, J.*, +, *T-IM Oct 00* 1091-1094
resist. bridge sens., meas.-plus-temp. readout, oscill.-based interface. *Ferrari, V.*, +, *T-IM Jun 00* 585-590
temp. sens., intrinsic, ref. liq. refr. index based. *Betta, G.*, +, *T-IM Feb 00* 25-29
YVO_4:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P.*, +, *T-IM Feb 00* 129-131
Temperature sensors; cf. Thermometers
Terrestrial atmosphere; cf. Atmospheric electromagnetic wave propagation; Atmospherics
Test equipment; cf. Automatic test equipment
Test facilities; cf. Aerospace test facilities
Testing; cf. Antenna testing; Automatic testing; Built-in self test; Electronic equipment testing; Life testing; Logic testing
Texture; cf. Surface texture
Thermal management (packaging)
high-temp. press.-transducer interface, smart sens., packaging. *de Jong, P.C.*, +, *T-IM Apr 00* 365-370
Thermal noise
lin. ccts., resistor-induced thermal noise, generalization. *Giannetti, R., T-IM Feb 00* 87-88
meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen*, +, *T-IM Feb 00* 77-82
sens. miniaturization, thermal noise effect on meas. accuracy. *Platonov, A.A.*, +, *T-IM Oct 00* 1018-1022
Thermal properties; cf. Thermal stability
Thermal stability
LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C.*, +, *T-IM Jun 00* 546-549
Thermal variables control; cf. Temperature control
Thermal variables measurement; cf. Temperature measurement
Thermometers
nano-Kelvin resoln. thermometer for low-temp. expts. *Welander, P.*, +, *T-IM Apr 00* 253-255
Thermostats
LF noise meas., computerized syst., temp. controlled oven. *Ciofi, C.*, +, *T-IM Jun 00* 546-549
Thickness measurement
multilayer struct. thickness meas. using echo detect./wavelet transform. *Angrisani, L.*, +, *T-IM Aug 00* 727-731
Thin films
YVO_4:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P.*, +, *T-IM Feb 00* 129-131
Time bases
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H.*, +, *T-IM Feb 00* 172-177
Time division multiple access
RF MSK data commun. devices testing. *Bucci, G.*, +, *T-IM Oct 00* 1009-1017
Time division multiplexing; cf. Synchronous digital hierarchy
Time-domain analysis
accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F.*, +, *T-IM Aug 00* 716-720
av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P.*, +, *T-IM Apr 00* 333-336
error measures for resampled irregular data. *de Waele, S.*, +, *T-IM Apr 00* 216-222
GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H.*, +, *T-IM Feb 00* 172-177
opt. smoke detector, false alarm probab. minim., freq. charact. optim. *Aleksic, Z.J., T-IM Feb 00* 37-42
RF MSK data commun. devices testing. *Bucci, G.*, +, *T-IM Oct 00* 1009-1017

Time-domain analysis; cf. Finite difference time-domain analysis; Time-frequency analysis

Time-domain reflectometry
- soil moisture meas. as fn. of depth. *Holdem, J.R.*, + , *T-IM Oct 00* 964-970
- time-domain NWA, thru-reflect-line calib., error minim. *Ferrari, P.*, + , *T-IM Feb 00* 178-187

Time-frequency analysis
- instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A.*, + , *T-IM Aug 00* 783-789
- knock acoustic sig. estim. using parametric inversion. *Boubal, O.*, + , *T-IM Aug 00* 890-895

Time resolved spectroscopy
- gated single-particle counting syst., errors anal. *Zielinski, M.*, *T-IM Oct 00* 1069-1076

Time series
- complex nonlinear exponential autoregressive model approach to shape recognition using neural networks. *Xiong, S.*, + , *T-IM Dec 00* 1298-1304
- methacholine detect., time series models of lung sounds. *Broersen, P.M.T.*, + , *T-IM Jun 00* 517-523
- stationary stochastic proc., spectral anal., time series models. *Broersen, P.M.T.*, *T-IM Aug 00* 766-772

Time-varying systems; cf. Stochastic systems

Timing jitter
- arbitrary waveform generators, periodic Σ-Δ modulated streams. *Dufort, B.*, + , *T-IM Feb 00* 188-199
- fast computation of maximum time interval error by binary decomp. *Bregni, S.*, + , *T-IM Dec 00* 1240-1244
- maximum likelihood estimator for jitter noise models. *Vandersteen, G.*, + , *T-IM Dec 00* 1282-1284
- RF MSK data commun. devices testing. *Bucci, G.*, + , *T-IM Oct 00* 1009-1017

Tomography
- freq. anal. of elec. impedance tomography syst. *Szczepanik, Z.*, + , *T-IM Aug 00* 844-851

Tomography; cf. Computerized tomography

Tools; cf. Machine tools

Topology; cf. Graph theory; Network topology

Tracking
- omnidirectional vision sens., fast tracking, for mobile robots. *Bonarini, A.*, + , *T-IM Jun 00* 509-512

Tracking; cf. Target tracking

Traction
- traction rails at 50 Hz, internal impedance mes. *Mariscotti, A.*, + , *T-IM Apr 00* 294-299

Transducers
- EM transducers in thermonuclear fusion expt. RFX. *Fiorentin, P.*, + , *T-IM Apr 00* 290-293
- error anal. of opt. current transducer operating with digital signal proc. syst. *Niewczas, P.*, + , *T-IM Dec 00* 1254-1259

Transducers; cf. Accelerometers; Hall effect transducers; Piezoelectric transducers; Pressure transducers

Transfer functions
- ADC, noise power ratio testing, mid-riser formulation. *Irons, F.H.*, + , *T-IM Jun 00* 659-665
- arbitrary waveform generators, periodic Σ-Δ modulated streams. *Dufort, B.*, + , *T-IM Feb 00* 188-199
- EM flowmeter for open channels, dry calib. procedure. *Michalski, A.*, *T-IM Apr 00* 434-438
- FRF meas., broadband vs. stepped sine methods. *Schoukens, J.*, + , *T-IM Apr 00* 275-278
- reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V.*, *T-IM Aug 00* 802-808

Transfer functions; cf. Optical transfer function

Transfer standards
- AC-DC electrometic transfer std., thermal converter comparison. *Pogliano, U.*, + , *T-IM Aug 00* 896-900
- AC-DC transfer calib., automated syst. *Filipski, P.S.*, + , *T-IM Apr 00* 279-284
- AC voltage meas., LF, accurate methods comparison. *Kampik, M.*, + , *T-IM Apr 00* 429-433
- coaxial resistors for precision meas., QHR transfer stds. *Elmquist, R.E.*, *T-IM Apr 00* 210-215
- stability eval. of high-precision multifunction instruments for traceability transfer. *Cassiago, C.*, + , *T-IM Dec 00* 1206-1210
- toroidal cross-capacitor, transportable std. *Castelli, F.*, *T-IM Aug 00* 721-726

Transformers; cf. Current transformers; Potential transformers

Transformer testing; cf. Power transformer testing

Transforms; cf. Hough transforms; Laplace transforms; Wavelet transforms

Transient analysis
- sig. interp. for monitoring/diagnosis, cooling syst. testbed. *Manders, E.-J.*, + , *T-IM Jun 00* 503-508

Transient response
- GaAs MESFET hybrid sampling syst. design, time-domain resoln. *Hafdallah, H.*, + , *T-IM Feb 00* 172-177
- knock acoustic sig. estim. using parametric inversion. *Boubal, O.*, + , *T-IM Aug 00* 890-895
- orthogonal peak detector for multiphase sinusoidal sigs. *Wu, K.-D.*, + , *T-IM Dec 00* 1216-1223
- time-variant directional mobile radio channels, impulse response, ident. *Thoma, R.S.*, + , *T-IM Apr 00* 357-364

Transients
- accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F.*, + , *T-IM Aug 00* 716-720
- FRF meas., broadband vs. stepped sine methods. *Schoukens, J.*, + , *T-IM Apr 00* 275-278

Transistor circuits; cf. Bipolar transistor circuits

Transistors; cf. Bipolar transistors

Transition metal alloys; cf. Cobalt alloys; Iron alloys

Transition metal compounds; cf. Yttrium compounds

Transmission; cf. Electromagnetic wave transmission

Transmitters; cf. Radio transmitters

Transponders
- FeCoSiBNd wire, GMI, mag. field sens., SAW transponders. *Hauser, H.*, + , *T-IM Jun 00* 648-652

Transport control; cf. Aerospace control; Computerized navigation

Transport processes; cf. Electrical resistivity

Tribology; cf. Friction; Mechanical contact

Truncation errors; cf. Roundoff errors

Tuning
- tunable vacuum-gap cryogenic coaxial capacitor. *Overney, F.*, + , *T-IM Dec 00* 1326-1330

Turbines; cf. Gas turbines

Two-port networks
- meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen*, + , *T-IM Feb 00* 77-82

Two-term control
- fiber-optic ESPI, automatic phase stepping. *Martini, G.*, + , *T-IM Aug 00* 823-828
- reactive energy meter, freq. insensitive phase shifter, digital realiz. *Saranovac, L.V.*, *T-IM Aug 00* 802-808

U

UHF measurement
- lossy media isotropic meas., MM-resoln. E-field probe, 100 MHz-20 GHz. *Pokovic, K.*, + , *T-IM Aug 00* 873-878

Ultrasonic applications
- chirped-FM US range sens., local meas. validation. *Mauris, G.*, + , *T-IM Aug 00* 835-839
- multilayer struct. thickness meas. using echo detect./wavelet transform. *Angrisani, L.*, + , *T-IM Aug 00* 727-731

Ultrasonic applications; cf. Biomedical ultrasonics; Ultrasonic materials testing

Ultrasonic materials testing
- Lamb-wave US NDE sig. anal., wavelet-transform-based method. *Legendre, S.*, + , *T-IM Jun 00* 524-530

Ultrasonic measurement
- chirped-FM US range sens., local meas. validation. *Mauris, G.*, + , *T-IM Aug 00* 835-839

Ultraviolet spectroscopy
- blood toxic oxid. activity eval., DSP, adaptive filter. *Barwicz, A.*, + , *T-IM Jun 00* 541-545

Uncertain systems; cf. Fuzzy systems

Uncertainty handling
- instrum. meas. errors, uncertainty handling, fuzzy/possibility approach. *Mauris, G.*, + , *T-IM Feb 00* 89-93

Units (measurement)
- kg unit of mass using supercond. MAGLEV. *Shiota, F.*, + , *T-IM Oct 00* 1117-1121

User interfaces; cf. Graphical user interfaces

Utility programs; cf. Application program interfaces

V

Vehicles; cf. Automatic guided vehicles

Velocimeters; cf. Laser velocimeters

Velocity measurement
- viscous and coulomb friction, meas. procedure. *Kelly, R.*, + , *T-IM Aug 00* 857-861

+ Check author entry for coauthors

Velocity measurement; cf. Angular velocity measurement

Vibration control; cf. Vibration isolation

Vibration isolation
microgravity isolation, implicit freq. weighting. *Hampton, R.D.*, + , *T-IM Apr 00* 265-269

Vibration measurement
small amplit. sinusoidal vibr. meas., Michelson interferometry. *Ivaschescu, V., T-IM Jun 00* 643-647

Video recording
multifactorial movement anal. in weightlessness. *Baroni, G.*, + , *T-IM Jun 00* 476-482

Virtual instrumentation
conditioning ccts. temp. drift errors minimization. *Pereira, J.M.D.*, + , *T-IM Oct 00* 1122-1127
harmonic losses meas., nonsinusoidal load currents supplying transformers. *Peretto, L.*, + , *T-IM Apr 00* 315-319
instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A.*, + , *T-IM Aug 00* 783-789
integrated bearing condition monitoring, virtual instrum. syst. *Wang, C.*, + , *T-IM Apr 00* 325-332
Intranet-controlled virtual instrum. multiple-cct. power monitoring. *Chung-Ping Young*, + , *T-IM Jun 00* 579-584
online frequency domain syst. identification based on virtual instrument. *Nemeth, J.G.*, + , *T-IM Dec 00* 1260-1263
optimal noise level in stochastic systs., params. meas. *Ando, B.*, + , *T-IM Oct 00* 1137-1143
Web-based distributed virtual educational lab. *Benetazzo, L.*, + , *T-IM Apr 00* 349-356

VLSI
accelerated testing of VLSI interconnects, resist. transients. *Fahrenkrug, C.C.F.*, + , *T-IM Aug 00* 716-720
cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin*, + , *T-IM Feb 00* 120-128
VLSI ccts. BIST, space compression. *Das, S.R.*, + , *T-IM Jun 00* 690-705

Voice communication; cf. Integrated voice/data communication

Voltage; cf. Electric potential

Voltage control
power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P.*, + , *T-IM Aug 00* 790-794

Voltage-controlled oscillators
laser range finder, FMCW-like method. *Journet, B.*, + , *T-IM Aug 00* 840-843

Voltage dividers
HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C.*, + , *T-IM Jun 00* 550-554

Voltage measurement
AC-DC electrometic transfer std., thermal converter comparison. *Pogliano, U.*, + , *T-IM Aug 00* 896-900
AC-DC transfer calib., automated syst. *Filipski, P.S.*, + , *T-IM Apr 00* 279-284
AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P.*, + , *T-IM Feb 00* 166-171
AC voltage meas., LF, accurate methods comparison. *Kampik, M.*, + , *T-IM Apr 00* 429-433
HV syst. distorted sig. meas., opt.-supplied voltage transducer. *Svelto, C.*, + , *T-IM Jun 00* 550-554
measuring slowly changing AC sigs. without sample-and-hold cct. *Petrovic, P.*, + , *T-IM Dec 00* 1245-1248

Voltmeters
why nanovoltmeter offset currents do not explain measured deviations in quantized Hall resistance. *Inglis, D.*, + , *T-IM Dec 00* 1358-1359

Voltmeters; cf. Digital voltmeters

Vortices
vortex whistle, freq.-detecting flowmeter use, fluidic oscillator. *Sato, H.*, + , *T-IM Feb 00* 200-205

W

Watthour meters
power calibrator, SMPS with sinusoidal output voltage waveform. *Zajec, P.*, + , *T-IM Aug 00* 790-794
stochastic watthour meter, high-precision, accuracy limit. *Pejic, D.*, + , *T-IM Jun 00* 617-620

Wattmeters
AC values meas., 50/60 Hz, slow A/D converter use, adaptive algm. *Petrovic, P.*, + , *T-IM Feb 00* 166-171
av. power estim. under nonsinusoidal conditions, data windowing. *Carbone, P.*, + , *T-IM Apr 00* 333-336

Waveform analysis
ADC, noise power ratio testing, mid-riser formulation. *Irons, F.H.*, + , *T-IM Jun 00* 659-665
elec. instrum. calib., nonsinusoidal conditions, test waveform selection. *Ferrero, A.*, + , *T-IM Apr 00* 382-387
intelligent strategy for improving meas. precision of FOG. *Handel, P.*, *T-IM Dec 00* 1189-1193

Waveform analysis; cf. Spectral analysis

Waveform generators
arbitrary waveform generators, periodic Σ-Δ modulated streams. *Dufort, B.*, + , *T-IM Feb 00* 188-199
sinewave generator synchronized design for AC metrology. *Callegaro, L.*, + , *T-IM Apr 00* 320-324

Waveform generators; cf. Time bases

Waveguide antenna arrays; cf. Microstrip antenna arrays

Waveguide antennas; cf. Horn antennas; Microstrip antennas

Waveguide discontinuities
solids dielec. const. meas., rect. waveguide inserted slab. *Gupta, S.*, + , *T-IM Feb 00* 66-70

Waveguide lasers; cf. Fiber lasers

Waveguides; cf. Circular waveguides; Rectangular waveguides; Waveguide discontinuities

Wavelet transforms
cased-hole corros. inspection, full-signature logging, VLSI chip. *Jiming Yin*, + , *T-IM Feb 00* 120-128
differential cuff press. meas., respiratory/cardiac rhythm disorders detect. *Dupuis, P.*, + , *T-IM Jun 00* 498-502
Lamb-wave US NDE sig. anal., wavelet-transform-based method. *Legendre, S.*, + , *T-IM Jun 00* 524-530
multilayer struct. thickness meas. using echo detect./wavelet transform. *Angrisani, L.*, + , *T-IM Aug 00* 727-731
NDT data fusion techs., pixel-level. *Gros, X.E.*, + , *T-IM Oct 00* 1083-1090
phase-sensitive vision for moving targets posn. meas. *Sandoz, P.*, + , *T-IM Aug 00* 867-872
reactive power meas. using wavelet transform. *Weon-Ki Yoon*, + , *T-IM Apr 00* 246-252

Welding; cf. Lead bonding

White noise
meas. syst. design & calib., noise generators, JFET stage. *Chun-Yu Chen*, + , *T-IM Feb 00* 77-82

White noise; cf. AWGN

Wiener filters
IR image registration and reconstruction, multiple video frames. *Alam, M.S.*, + , *T-IM Oct 00* 915-923

Wigner distribution
instantaneous freq. meas., PC-based instrum. design, DSP. *Carlosena, A.*, + , *T-IM Aug 00* 783-789

X

X-ray applications; cf. X-ray imaging

X-ray imaging
CdZnTe based sensor for X-ray imaging appls. *Giakos, G.C.*, + , *T-IM Apr 00* 300-306

X-ray imaging; cf. Diagnostic radiography

Y

Yttrium compounds
YVO_4:Eu thin film/bonded powder phosphor, engine thermographic sens. *McClean, I.P.*, + , *T-IM Feb 00* 129-131

Z

Zero gravity experiments
microgravity isolation, implicit freq. weighting. *Hampton, R.D.*, + , *T-IM Apr 00* 265-269
multifactorial movement anal. in weightlessness. *Baroni, G.*, + , *T-IM Jun 00* 476-482

Zinc compounds
CdZnTe based sensor for X-ray imaging appls. *Giakos, G.C.*, + , *T-IM Apr 00* 300-306

+ *Check author entry for coauthors*